



# **An Investigation Into the Vacational Preferences of Higher Secondary School Pupils**

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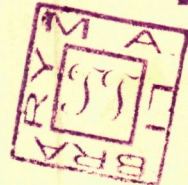
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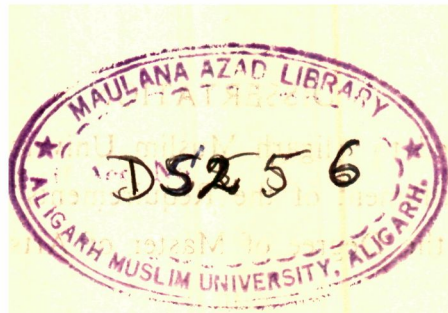
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## A C K N O W L E D G E M E N T

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## CHAPTER - I

### INTRODUCTION

The acid test of any educational system in a developing country such as in India is its capability to produce such individuals who are not only strong in mind and body but are also equally strong in vocational ability. In fact, the objective of vocational efficiency has, time and again, been reiterated by various Educational Commissions. The Kothari Education Commission has given a place of prestige to the aim of vocational efficiency among other five important aims of Secondary Education. This aim has not escaped the attention of our national leaders, and policy makers too who have been voicing the need of developing productive skill in the students so that they may not hanker after Government jobs when they terminate their education and join the world of work but may engage themselves in self employment. The problem of unemployment which has assumed alarming magnitude cannot be solved unless the programme of vocational orientation is seriously taken in senior classes of Secondary Education. Exploration of pupils' vocational interests and dovetailing various courses of study to them should receive proper treatment

during the period of secondary education. This aspect of adolescents' education has been seriously neglected hitherto but it should not be neglected any longer. The aim of re-construction of society through building a strong technological and industrial base cannot be realized without introducing in schools the programme of effective vocational guidance of which identification and development of vocational interests of the students is an integral component. It would be no exaggeration to say that vocational planning of which identification of vocational interests is the beginning step is the apex of any true education of an individual. In his adult life the individual spends a major part of his waking time either in doing work or thinking about it. It is his vocation that determines the type of life he would lead, the social circle in which he would move, the kind of friends he would have and the values and ideals he would inculcate. Such is the importance of a man's vocation for his life.

Even at school during adolescence period the pupil begins to think and worry about his future

vocation Havinghurst has clearly delineated need of vocation as one of the developmental tasks during the period of adolescence.

It is rightly alleged that in the present system of Secondary Education the child is overburdened with verbal learning at the cost of manipulative skills. His mind is inflated at the cost of his hands. This kind of lopsidedness of our education has eroded people's faith in its effectiveness as an instrument of helping the child to enter into any productive occupation that might be commensurate with his vocational interests and capabilities. Such a system does more harm than good to its recipient. It not only does nothing to develop his vocational efficiency but also impairs his general adjustment in life by making him a parasite, who sustains himself on the exploitation of others.

Halfhearted attempts have been made in the past to remove this basic defect from the educational system by introducing diversified courses and guiding children to choose such courses as might be in keeping with their attitudes, abilities and interests. These efforts, however, do not seem to have succeeded

in view of the fact that the interest patterns of pupils, how they develop and change, were not systematically studied. Nor were the various determinants of vocational interests scientifically explored. Choosing courses on the basis of trial and error without relating them to one's genuine interests often leads to wrong choices and consequent failure. Interests are the core of motivation. If a student selects courses of study that are not in accord with his genuine interests then he would lack necessary motivation to pursue them and would meet frustration and failure.

Vocational interests are the bedrock of a man's progress in his chosen career. This choice does not happen suddenly at some one point of time but, from a continuous process starting from quite early in life and terminating at the stage of entry into the occupation. Awareness by the individual of his vocational interests is the starting point of the process of vocational choice. Hence, it is necessary that vocational interests of students are thoroughly investigated and a strong structure of their education



be built on them.

In our country a scanty attention has thus far been given to this aspect with the result that nothing much is known about the genesis, development, stability and co-relates of vocational interests of adolescents. The researches done in U.S.A. or Britain, in this vital area can by no means eliminate the need of research in this country. Interests do not develop in vacuums; they are the product of various social and cultural influences that continually imping on the child. A child can develop interests in only such vocations and activities to which he is exposed by his milieu. His interaction with his environment and the experiences, he, thus, undergoes form the raw-material for development of his vocational interests.

Thus, it becomes obvious that systematic, scientific and extensive research in the area of vocational interests is much needed in this country. Keeping this fact in mind, the investigator interested himself in this area and selected the following problems for investigation:

### Statement of the problem

" A study of vocational interests of students of of secondary classes in relation to their occupational choices, parents' ambition, sex and socio-economic studies".

### Purpose of the study

The above problem was selected with a view to investigate the dominant vocational interests of the students of secondary classes. The aim was to find out which of the areas of human endeavour are preferred by majority of the students and which are liked least by them. In addition, it was sought to study as to what extent vocational interests were stable over years of growth of Indian children. It is evidenced from researches in the west that vocational interests do not change substantially after the age of about 18. By this investigation, it was intended to find out how far vocational interests of Indian children support these findings. Let another purpose of this study was to know whether there is any congruence between vocational interests of pupils on the one hand and their vocational choices and parents' ambitions on the other. ~~545~~

This study was also directed to investigate realism in pupils' vocational choice. It is obvious that one of the dimensions of realism consists of accord or agreement between vocational interests and vocational choices and to some extent parents' ambition. Lastly, this investigation aimed at finding out if pupils are differentiable in their interest patterns on the basis of sex and socio-economic status. Needless to say that a study of co-relates of vocational interests among which sex and socio-economic status are presumed to be most significantly influential would go a long way in conceptualizing the implications of vocational interests for vocational guidance programme in secondary schools.

#### Hypothesis of the study:

What tentative results are expected from the investigation? To answer this question the investigator had to make an intimate study of all available literature in vocational guidance and examine and analyse various reports and researches in this area. In the light of all this as well as careful observations, the following propositions were formulated. They are however nothing more than investigator's conjectures and should be accepted

as such till they are found tenable or otherwise by the findings empirically arrived at in this study.

1. Vocational interests of the pupils are in general spread over various occupational areas.
2. There is no marked difference in dominant interests of pupils of the two sexes.
3. There is no substantial difference in vocational interests of pupils on the basis of difference in class during late adolescence.
4. The occupation of parents does not affect dominant vocational interests pattern of secondary school students.
5. Vocational interests of pupils are not influenced by education of the parents.
6. There is no relationship between income of parents and vocational interests of their wards.
7. The occupational choices of pupils do not have any relationship with their vocational interests.
8. Vocational choices of pupils and their parents' ambitions are not in agreement with one-an-other.

Definition of terms:

In this study some concepts such as vocational interests, occupational choices, parents ambitions and dominant interest pattern etc. have frequently occurred. In view of the unfortunate situation that there is no uniformity in the use of terminology in the literature of vocational guidance it seems imperative to clearly define as to what meanings of these terms have been accepted for the purpose of the study. It is necessary to do so to avoid confusion and misunderstanding in what is communicated to the readers.

1. Vocational interest:

The term vocational interest is taken to mean an individual's likes and dislikes for various activities relating to different areas of human endeavour. They also imply preferences of the individual and are a part of human motivation that give direction to his efforts. Vocational interests are thus mental dispositions or tendencies that incline or attract a man towards certain activities and make him ignore others. Strong calls interests as feeling of attraction and feelings of aversion. Interests have been clearly differentiated from attitudes in psychological literature.



It may be out of place to discuss the difference between the two in this study.

## 2. Occupational Choice:

Occupational choice has been defined in this study as a continuous process following Ginzborg, Super, Anne Roe and Gritis. Vocational choice at adolescent stage is a part of various stages of occupational choice and is considered tentative in nature. For this investigation a pupils' occupational choice means his selection of specific occupation in which he likes to enter and not necessarily destined to enter.

## 3. Parents' ambition:

The term parents' ambition signifies parents' wish <sup>about</sup> their wards' future occupation. It denotes their preferences of the occupation in which they would like their ward to enter.

## 4. Dominant interest pattern:

It is wellknown that in childhood the interests are quite diffused and spread over large number of areas; but with the development of the child the process of progressive delimitation begins culminating into

a very narrow range of activities in one or two specific areas in which interests begin to concentrate. Dominant interest patterns have, in this study, been recognized as those areas in the activities of which a pupil has his interests concentrated. It is possible that the interests may spill over other areas too but their degree will be far less than those in the dominant area.

Educational Significance :

The present study is significant in the sense that it is expected to create in the teachers an awareness for the need of exploring pupils' interests in various areas of human activity. If learning has to be made meaningful to the child, it has to be woven round his interests. Teachers have a responsibility to facilitate the process of learning by the child. For this purpose identification of pupils' vocational interests is of utmost importance.

For pupils themselves a knowledge of their real interests is much helpful. Since the subjects of study that they choose have a direct bearing on occupations, it is necessary that students select those

courses of study as would lead to the occupation in which they are intending to enter. Wrong choice of subjects may obstruct their success in the chosen field of work. The pupils will come to know about those occupational areas in which their genuine interests lie. It will help them in further strengthening those interests and thus making realistic planning for their future vocations.

Vocational orientation of the pupils being an important part of Secondary Education is likely to receive impetus by the results of this study. The teachers and guidance workers would benefit by the results in order to give a sound footing to their respective programmes of teaching and guidance. Teaching would thus become more realistic, meaningful and interesting to the educand.

It was with these benefits in mind that the investigator undertook the present study.

Scope of the study :

Being a part of the requirements of M.A. degree the span and scope of the project could not be as encompassing and wide as is needed for an intensive investigation covering all major aspects of the problem of vocational interests. In view of the paucity of time and resources the study had to be delimited both in respect of Sample, area of the study as well as Variables.

Regarding the Sample the study covers the adolescence period during which vocational interests begin to crystallise. Exclusion of earlier period from this project was governed by the consideration that the diffused and floating nature of interests during that period as it makes futile to predict any thing on their basis.

However students of both sexes were included in order to study sex difference in choice of occupations and in vocational interests.

Since parents' ambition income and occupation happen to be important extraneous factors that influence their wards' future vocational career, it was thought necessary to study their impact at

different levels of pupils' ages during adolescence. No other factor was investigated. For example, rural-urban dicotomy was ignored, though it is assumed that vocational interest patterns of pupils are also affected by this factor.

The study was also restricted to 3 main occupations of parents namely, agriculture, business and service. Further categories of these occupations were also not made in order to avoid complications in analysis of results. It is admitted that such a gross categorisation and bunching might have resulted in loss of much valuable information that could be from the data.

The area of this investigation was also confined to two cities namely Azamgarh and Lucknow and one town namely Mubarakpur. For practical reasons the area could not be enlarged so as to represent even any one specific zone of U.P. or both rural and urban population of any one district adequately.

These delimitations are, however, in line with the purposes of the study which are limited in view of the paucity of time and resources at the disposal of the investigator. Thus they do not circumscribe the value of the investigation.



## CHAPTER - II

### RELATED STUDIES

Abundance of research has been done on different aspects of adolescence and quite a few of the studies have been devoted to adolescent interest in school subjects, in vocation or in some other aspects of life. The present investigation is aimed at studying vocational interests of secondary school students. The vocational interests are to be analysed on the basis of sex and SES in order to study the influence of these variables on development of interests. Additionally relationship between pupils' occupational choices on the one hand and their vocational interests and parents' ambition on the other will also be investigated. Hence, only such studies are taken up for review as have a direct bearing on the present work.

A brief discussion of the relevant research is presented in the following pages.

- 1) A study made by Strong<sup>1</sup> and another made by

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1. Strong, H.C. *Ek Vocational Interests of Men and Women*. California, Stanford University Press 1943.

Rocher and Solgarfield<sup>1</sup> showed that the adolescent boys were mainly interested in occupations like aviation, engineering, exploring, inventing mechanics, and athletics. Forming was also common interest among boys while stenography, teaching, house work, *nursery* were common interests among girls. Strong also concluded that adolescent boys liked those activities which required physical skill, such as playing base ball, driving automobile, hunting and climbing.

2) Rothney<sup>2</sup> studied the interests of secondary school boys and concluded that adolescents were highly interested in travels, sports, movies and the radio. They were also interested in pots, collections, reading and school though to a lesser degree, and next come interests in painting, writing,

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1. Rocher, E. and Solgarfield, A Study of Occupational Interest of High School Students in terms of grade placement, Journal of Educational - Psychology, Vol.34, Sept. 1943, P.350.
  2. Rothney, J.U.N., Interests of Public Secondary-School Boys, Journal of Educational Psychology 28, 561-594, 1937 Referred by Col. L., Psychology of Adolescence, New York : Rinehart and Company, 1951.

music, social relations and co-curricular activities. Very few adolescents were found to be interested in religious activities. Among girls games were found to be less interesting than home and social activities.

3) Summarising the results of some studies Anastasi<sup>1</sup> writes that adolescent boys are more interested in active and vigorous play, muscular activities and competitive games, while adolescent girls are interested in less active play and in activities demanding lesser degree of muscular work.

4) 'Fleege<sup>2</sup> has tried to identify the specific interests of the adolescents. His conclusions are that boys are interested in jokes, movies and discussion of sports, while girls are interested in social activities such as attending parties and cutting jokes and also in reading books. The most common topics of discussion among adolescents are of special nature, such as about fraternities, parties, cloth etc.

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1. Anastasi, Anno, Differential Psychology, New York, Macmillan Company 1958, PP.478.

2. Fleege, U.H., Self Revaluation of the Adolescent Boys. Milwaukee : Bruce Publishing Company, 1945, P.234 .

5) Colo<sup>1</sup> has analysed interests in physical and out-door activities in terms of age. According to him 12 year old boy is interested in such activities as swimming, camping and hiking. When he reaches the stage of middle adolescence his favourite activities become more social and he likes to participate in highly organized group games. As the age increases this interest in games become less and grows to be passive rather than active. Girls at the age of 15 years are most interested in all athletic activities but at 21 their interest in physical activities decline.

6) Garrison<sup>2</sup> has found that the average high school student shows marked interest in base-ball, basket-ball, hunting and other games and that team games are very popular in this age.

7) Rallison<sup>3</sup> conducted a study on senior school children i.e. adolescents. He divided the interests

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1. Col, L. Psychology of adolescence. New York: Rinehart and Co., Inc., 1948, P.488-490.

2. Garrison, K.C. Psychology of adolescence. Prentice-Hall, Inc., Englewood Cliffs, N.J.U.S.A. 1956, P.145-148.

3. Rallison, R., The interest of senior school children in non-scientific subjects. British Journal of Education Psy. Vol.XIII, Part 1, Feb.1943, P.39.

under investigation into two broad categories

- 1) Interests in specific subjects.
- 2) Interest in non-specific subjects.

His sample was composed of both boys and girls. In the total sample studied by him interests in physical training, cricket and swimming ranked high. Among boys taken separately baseball, running and football and among girls, jumping, dodgeball, hockey and netball were found most popular.

8) Hurlock<sup>1</sup> also supports the view that interest in strenuous activities reaches its peak during early adolescence then it becomes less and less. She got highest scores in swimming at early adolescence for both boys and girls, next come baseball and football whereas tennis ranks the lowest. At the time of later adolescence the boys and girls were more inclined to be spectators rather than participants in games.

9) Anatsi<sup>2</sup> shows in her book that boys were generally engaged in active vigorous games, in

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1. Hurlock, E.B. Developmental Psychology. New York, McGraw Hill Book Co., Inc., 1959, Page 302, 351-352.
  2. Anatsi, Anne, Differential Psychology. Individual and Group differences in Behaviour. The Macmillan Company, 1958.



activities involving muscular dexterity and skill, and in highly organized and competitive games.

10) Malm and Jamison,<sup>1</sup> quoting the findings of the California growth study say that 59% boys and 31% girls participated in some athletic activity . When boys were together, they talked about sports.

11) Stephones<sup>2</sup> reports that girls during puberty are not only interested in physical activities but they also take interest in conversation about sport. But during later adolescence they are mostly interested in the conversation about sports.

12) Carmichael<sup>3</sup> has reported the study of Hildreth<sup>4</sup> on the play interests of 89 boys and 84 girls in the 9th grade, and 52 boys and 51 girls in the 12th grade enrolled in one public and one private school check lists were given out and the subjects

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1. Malm, M., and Jamison, O. G. Adolescence. New York, McGraw Hill Book Company Inc., 1952.
  2. Stephones, J. M. Educational Psychology, New York: Henry Holt and Company, 1951, PP 572-579.
  3. Carmichael, L., Manual of Children Psychology. New York. John Wiley and Sons, 1954.
  4. Hildreth, C., Adolescent Interest and Ability. Genet. Psy., 43, 65-93. 1933.

were asked to mention three games which they liked best, Football was chosen almost exclusively by boys. Baseball was most popular with boys, but it was ranked low by girls. There was little difference in the preferences for basket ball.

13) Hammond made a study of adolescent interest and concluded that adolescent girls were less interested than boys in athletic activities in general.

14) Pourter<sup>1</sup> found in a study that about 66% of a group of boys contacted after six months of high school graduation were following vocational plan they had stated shortly before graduation. These results indicate substantial stability over a short time span. In yet another study Rothny<sup>2</sup> found consistency between plan and subsequent activity in about 53% of boys over a comparable length of time. The same author investigated stability of vocational choices in 10th, 11th and 12th grades and found that nearly one third of them changed their choices atleast once during the three year period.

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1. T. Jersild, The Psychology of Adolescence.  
Second Edition. The Macmillan Company  
Collier-Macmillan Limited, London. PP.336-337.

2. Ibid, P. 368.

15) Davison<sup>3</sup> and Anderson (1957), Hollynchood (1949), Mether and Form (1951) also suggest that there is a considerable amount of job change during the early post-high-school years.

### CHAPTER - III

#### METHOD OF THE STUDY

In a scientific investigation the method and techniques employed play a most vital role for arriving at valid conclusions. It is, therefore, very necessary that use of appropriate method and techniques is made in research. What method is suitable for a given investigation depends on the purpose of the study and the nature of data to be collected and analysed.

The present study is aimed at collecting and comparing information regarding existing status of pupils in the area of vocational interests and determining relationships among vocational interests and some selected independent variables. Therefore, it naturally falls under "Survey Method". This method applies to the type of investigations which deal with current state of affairs, existing phenomena or beliefs, opinions, attitudes, abilities and achievements presently possessed. It makes use of the techniques of statistical description,

correlation and comparison etc. /in analysis of the data and drawing of necessary generalizations. In designing the study selection of suitable sample is also of equal importance because unrepresentative, biased or inadequate sample introduces several types of errors in results and leads to faulty conclusions.

Sample of the Study:

Selection of the sample for the study is based on 'Cluster Sampling' method. According to this method a number of whole classes or groups are included in the study. For practical reasons and convenience the investigator conducted the study on all members of class 10th, and 12th selected from three Intermediate Colleges located in Eastern U.P. The description of the sample is provided in the following tables:

Distribution of the sample by Institution and Sex

S.No.	Name of Institution	Class	No.		Total
			Boys	Girls	
1.	Municipal Girls Inter College, Lucknow(U.P.)	XII	NIL	62	62
2.	Shibli National Inter College, Azamgarh(U.P.)	XII X	50 77	NIL NIL	127
3.	M.P.Inter College Mubarakpur, Azamgarh(U.P.)	XII	111	NIL	111
Total			238	62	300

TABLE NO.3.2

Distribution of the sample by parents' Occupation

Parents' Occupation	Number		Total
	Boys	Girls	
Agriculture	145	4	149
Service	56	43	99
Business	37	15	52
Total	238	62	300

TARLI NO.3.3

Distribution of the sample by parents' income

Parents' Income	Number		Total
	Boys	Girls	
1 - 200	130	5	135
201-400	45	30	75
401-600	47	17	64
601-800	6	8	14
801-1000	10	2	12
Total	238	62	300



TABLE NO.3.4

Distribution of the sample by parents' education

Parents' Education	Number		Total
	Boys	Girls	
Post-Graduate	10	1	11
Graduate	12	9	21
High School and Intermediate	50	40	98
Below High School	41	5	46
Uneducated	109	2	111
Professional	08	5	13
Total	238	62	300

Distribution of the sample on the basis of classes, Institutions, sex, parents' occupations, income and education has been shown in tables 3.1 to

3.4. The analysis shows that the sample consists of three hundred students out of whom two hundred thirty eight (238) are boys and sixty two (62) girls. They were selected from three institutions, <sup>1</sup> girls school and two boys schools located in Lucknow, Azamgarh and Mubarakpur in eastern U.P. The sample represents three main occupational groups namely Service, Agriculture and Business. Most of the boys come from agricultural families. In fact, they are more than double in number than boys belonging to service and business classes taken together. This trend is reversed in case of girls. Very few girls are found to belong to agricultural families. The reason for this imbalance in the sample is that agriculturists do not generally send their daughters in cities for education and very few girls Inter Colleges are located in villages. The proportion of boys and girls in the sample relating to service and business classes is roughly representative of population of the two sexes in schools.

Regarding distribution of sample by parents' income it may be seen in table 3.3 that a majority of both boys and girls come from families whose income is less than Rs. 600/- per month. Out of 238 boys and

62 girls only 16 boys and 10 girls belong to families whose income exceeds Rs.600/-.

Thus it can be said that the sample mainly constitutes of lower-middle and middle income groups. So far as distribution of sample by parents' education is concerned table 3.4 reveals that out of three hundred students one hundred eleven (111) belong to un-educated parents but the number of girls belonging to this category is only two. A majority of the girls i.e. forty(40) belongs to parents having high school and Intermediate level education.

Clearly, boys and girls are not alike from the point of view of their parents educational level. This bias in the sample has occurred because of the fact that un-educated parents do not generally send their daughters to schools . This fact would however be kept in view during analysis of data and interpretation of the results.

Tools used in this study:

For obtaining the data required for this study the undermentioned tools were used by the investigator.

- 1) Vocational Preference Record.<sup>1</sup>  
Bureau of Psychology Allahabad, 1952.

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1. See Appendix-A.

2) A questionnaire developed by the<sup>2</sup> investigator.

**A. Vocational preference record.**

For identifying vocational interests of the students, the investigator selected "Vocational Preference Record" developed by Bureau of Psychology, Allahabad. This tool is in Hindi language and lists suitable vocational activities from social and occupational environment of the pupils. There are, in all, 80 eighty activities pertaining to ten(10) areas, namely, outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social, and clerical. Examples of two activities provided in the preference Record under each area are given below:

**1) Area - I Outdoor**

1. Mountaineering
2. To go for fishing

**Area - II Mechanical**

1. To work in textiles
2. To work in wooden factory

**Area - III Computational**

1. To keep an account of expenditure and earnings.
2. To teach mathematics in higher classes.

Area - IV Scientific

1. To study about the planets and stars.
2. To make out new discoveries in the field of biology.

Area - V Persuasive

1. To have trade with foreign countries.
2. To work for a political party.

Area - VI Artistic

1. To become a cartoonist.
2. To think out new designs for cloth.

Area - VII Literary

1. To become a good novelist.
2. To become a poet.

Area VIII Musical

1. To write film songs.
2. To learn classical music.

Area - IX Social

1. To teach un-educated persons.
2. To do social service.

Area - X Clerical

1. To learn short-hand typing.
2. To scrutinize the answer books.

Students taking this interest inventory are required to indicate from each of the ten fields their preference for each listed activity in terms of

'Most liked' 'liked' and 'least liked'. There is no time limit but students usually complete the inventory in about 20 minutes.

#### Scoring:

Scoring of pupils' interest in each area is done by summing up the numbers encircled by him. Thus areawise score as well as total interest scores for the students are obtained. The areawise score helps in knowing the area in which dominant interests of a given student lie.

This tool was administered to the sample by visiting their schools personally and getting the preference record filled by each subject. The responses were then scored as per method mentioned above.

#### Questionnaire:

The questionnaire developed by the investigator was mainly designed to gather information regarding those factors which were included as independent variables in the study in order to determine their effect on vocational interests. They include sex, age and class of the subjects, education, occupation and income of their parents, subjects' vocational choice and their

perception of requisite ability to succeed in the chosen vocation and parents' ambition. The questionnaire was framed in simple English language and it elicited pupils' responses in the blank space left under each question. Information about pupils' identity was also gathered through this questionnaire.

Method of analysis of the data :

The type of data collected for this study included scores of the sample in each of the ten areas of vocational interest. Other kind of information gathered included vocational choices made by the students and their responses in terms of 'yes' or 'no' regarding whether they possessed necessary ability to succeed in chosen vocation. Still other kind of information included names of occupations which the parents wished their wards to enter and education, occupation and income of the parents.

For analyses of the data several techniques were employed. The dominant interests of the subjects were

identified on the basis of the area in which they had the highest score. Areas of the least interest were also identified likewise. The dominant interest scores were then arranged and re-arranged on the basis of each independent variable and necessary tables prepared.

Comparison of the dominant interests on the basis of sex, class and education, occupation and income of the parents were made by employing appropriate statistical techniques which included the following Pearson's rank order correlation. This technique was employed in finding the extent of agreement and disagreement in the ordering of various areas of vocational interests by the students in all such instances where they were divided in two groups on the basis of any independent variable. The significance of the rho was tested by t technique using the following formula:

$$t = \frac{rd \sqrt{N - 2}}{\sqrt{1 - r^2d}}$$



This technique<sup>1</sup> gives satisfactory results when number of pairs of observations is about 8 or more. The significance of obtained 't' value is found by referring to the table of 't' under (N-2) degrees of freedom.

(2) Coefficient of Correlation. Yet another statistical technique used in the analysis of a part of the data was Kendall's Coefficient of concordance, W. This technique was applied in finding the agreement and disagreement in the ranking of the ten areas of vocational interests on all such instances where more than two groups of pupils were involved in ranking. The formula used to compute W is :

$$W = \frac{12 \sum D^2}{m^2 (N) (N^2 - 1)}$$

The significance of W was tested by the use of tables developed<sup>2</sup> by Kendall.

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1. Statistic in Education and Psychology. A First Course. MERLE W TATE, P.281.
  2. Basic Statistical Methods. Second Edition, N.M. DOWNIE, P.210, P.314.

3) Chi-Square test. Another statistical technique that was used in testing whether agreement and disagreement in pupils' vocational choices and parents' ambitions were independent of sex, was Chi square test. This test was also employed in finding out whether agreement or disagreement between choices and their interests was independent of parents income, education and occupation.

Agreement and disagreement in pupils choices and their interests was also examined through the use of Chi Square. The formula used in case of small frequencies in <sup>c</sup> cells which includes Yates correction is as follows:

$$\chi^2 = \sum \frac{(O - E - 0.5)^2}{E} \quad \text{✓}$$

Whatever frequencies in the <sup>c</sup> cells of the table were greater than ten this formula did not contain Yates correction and had the following form

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Significance of differences between percentages obtained in some comparisons was found by computing 'Z' and testing the probability against 1.96 and 2.58 values at .05 and .01 levels respectively. The following formula was employed for this purpose:

$$Z = \frac{P_1 - P_2}{\sqrt{\frac{S^2_{P_1}}{P_1} + \frac{S^2_{P_2}}{P_2}}}$$

Here it may be added that the statistic used in this study are non-parametric because the nature of the data being ordinal did not warrant the use of more sophisticated parametric statistics. The significance of all the values was tested at .05 level.

The analysis of the data is presented with necessary interpretations in the next chapter.

CHAPTER - IV

PRESENTATION ANALYSIS AND INTERPRETATION OF THE DATA

The design of the study was discussed in the previous chapter. The present chapter deals with presentation, analysis and interpretation of the data. The analysis of the data takes on several forms and has been tabulated in a number of tables which are followed by necessary interpretation. The tables and their discussions are arranged in the chapter in the order in which hypotheses have been formulated in chapter one. This has been with a view to testing the hypotheses in an order in which they occur in chapter I.

A-De-limitation of Vocational Interests.

To begin with, the interests of the pupils were analysed to judge the extent of progressive de-limitation in them. The results of the same are presented in the following table:

TABLE 4.1

Number of areas in which interests of the sample lie

No. of Areas =10			Sample No.=300			
No. of areas	Boys		Girls		Total	
	N	P	N	P	N	P
8 To 10	208	87.4%	51	82.2%	259	86.3%
5 To 7	27	11.3%	08	12.9%	35	11.6%
1 To 4	3	1.3%	03	4.8%	06	2%
Total	238		62		300	

The analyses presented in the above table shows that 86.6% of the pupils show their interest in 8 to 10 areas. This is clear indication of the fact that during adolescence the interests of the students remain diffused over a wide range of vocational areas. This is true in case of both boys and girls. As would be seen in the table 87.4% of boys and 82.2% of girls have their vocational interests spread over 8 to 10 vocational areas. About 12% pupils choose vocational activities from 5 to 7 areas and only 2% choose them from 1 to 2 areas.

When the problem of de-limitation of vocational interests is examined on the basis of sex, a trend favouring girls is discernible although the difference in the percentages may not be statistically significant. The table shows that the percentage of girls constantly assumes greater size than that of boys as the range of vocational interests areas become narrower.

These results can be summed up as follows:

- 1) No appreciable trend towards de-limitation of vocational interests appears up to middle adolescence stage. The hypothesis formulated in the study, stated that vocational interests of the pupils are in general spread over various occupational areas. This hypothesis is not rejected by the results of the study.
- 2) The process of de-limitation of vocational interests is more apparent in girls than boys.

Most liked' and 'least liked' interest areas

Having examined the degree of progressive delimitation in pupils' vocational interests, the data is analysed in the following tables to find out the

'most liked' and 'least liked' areas of their vocational interests.

TABLE 4.2

Percent of students having dominant interests in various areas

Interest areas	N=300		
	No.	Percentage	Rank
Outdoor	18	6.0%	5
Mechanical	13	4.4%	6
Computational	39	13.00%	3
Scientific	23	7.6%	4
Persuasive	12	4.00%	8
Artistic	11	3.7%	9.5
Literary	14	4.6%	7
Musical	11	3.6%	9.5
Social	90	30.00%	1
Clerical	69	23.00%	2
	300		

TABLE 4.3

Percentage of students having least interests in various areas

Interest areas	N=300		
	No.	Percentage	Rank
Outdoor	29	9.6%	5
Mechanical	53	17.6%	22
Computational	14	4.6%	8
Scientific	18	6.00%	6
Persuasive	32	10.6%	3
Artistic	30	10.00%	4
Literary	15	5.00%	7
Musical	107	35.6%	1
Social	-	-	10
Clerical	2	.60%	9
300			

A perusal of analysis of the data contained in tables 4.2 and 4.3 reveals that the 'most liked' areas are social,



clerical and computational in which 30%, 23% and 13 percent of the students respectively have their dominant interests. The percentages of students having dominant interests in other areas are quite low, none exceeding 8 percent. Musical and artistic areas are 'most liked' by only 3.6 percent and 3.7 percent of students.

When table 4.3 is inspected, it is found that musical and mechanical areas are 'least liked' by more students than other areas, the respective percentages being 35.6 and 17.6. About 10 percent of students have 'least liking' for persuasive and artistic areas.

The analyses given in table 4.2 and 4.3 when read together go to show that some vocational interest areas are neither intensively liked by a majority of students nor are intensively disliked. It is only social service area which is liked most by about one third of the sample but disliked by none. Clerical area also enjoys almost similar status. On the contrary musical area is disliked most by about one third of the sample and liked by only 3.6 percent. Mechanical area also can be placed in the

TABLE 4.1

Number of areas in which interests of the sample lie

<u>No. of Areas = 10</u>			<u>Sample No. = 300</u>			
<u>No. of areas</u>	<u>Boys</u>		<u>Girls</u>		<u>Total</u>	
	<u>N</u>	<u>P</u>	<u>N</u>	<u>P</u>	<u>N</u>	<u>P</u>
8 To 10	208	87.4%	51	82.2%	259	86.3%
5 To 7	27	11.3%	08	12.9%	35	11.6%
1 To 4	3	1.3%	03	4.8%	06	2%
Total	238		62		300	

The analyses presented in the above table shows that 86.6% of the pupils show their interest in 8 to 10 areas. This is clear indication of the fact that during adolescence the interests of the students remain diffused over a wide range of vocational areas. This is true in case of both boys and girls. As would be seen in the table 87.4% of boys and 82.2% of girls have their vocational interests spread over 8 to 10 vocational areas. About 12% pupils choose vocational activities from 5 to 7 areas and only 2% choose them from 1 to 2 areas.

same category. The other areas which are disliked most by greater percentage of students than liked are persuasive, artistic and outdoor.

To sum up the results of the analyses it can be said that the most liked areas of vocational interests of the sample consist of social (30 percent), clerical (23 percent) and computational (15 percent) and least liked areas consist of musical (35.6 percent), mechanical (17.6 percent), persuasive (10.6 percent) and artistic (10 percent). Other vocational areas such as outdoor, scientific and literary are such that they are most liked and least liked by about equal percent of students.

#### C- Dominant interests of boys and girls

The study hypothesized that there is no marked difference in dominant interests of boys and girls. In order to test the veracity of this hypotheses, the percentages of each group of boys and girls having dominant interest in each of the ten areas were calculated. Then rank of each area was determined on

the basis of these percentages for boys and girls separately and rank difference correlation computed. A similar analysis was done in respect of areas of least interests. The results of both analyses are presented in tables 4.4 and 4.5 below:

TABLE 4.4  
Relationship between areas of dominant interest of boys  
and girls

Interest	SEX						d	d <sup>2</sup>	Rho
	Boys XII, X			Girls XII					
	No.	Per.	Rank	No.	Per.	Rank			
Outdoor	16	6.8%	5	2	3.3%	6.5	1.5	2.25	
Mechanical	13	5.5%	6.5	-	-	10	3.5	12.25	
Computational	36	15.2%	3	4	6.5%	5	2.0	4.00	.25
Scientific	21	8.9%	4	2	3.3%	6.5	2.5	6.25	
Persuasive	11	4.4%	8	1	1.7%	8.5%	0.5	0.25	
Artistic	4	1.8%	9	7	11.2%	3.5	5.5	30.05	
Literary	13	5.5%	6.5	1	1.7%	8.5	2.0	4.00	ts=.730
Musical	3	1.3%	10	7	11.2%	3.5	6.5	42.25	IS at
Social	64	27%	1	26	42%	1	0	0.0	.05 level
Clerical	57	24%	2	12	19.4%	2	0	0.0	
<hr/>									
238			62						

TABLE 4.5

Relationship between areas of least interest of boys and girls

Interest area	SEX						d	d <sup>2</sup>	rho
	Boys XII, X			Girls XII					
	No.	Perf.	Rank	No.	Perf.	Rank			
Outdoor	25	10.6%	3	4	6.5%	5	2.0	4.00	
Mechanical	21	8.9%	4.5	32	51.7	1	3.5	12.25	
Computa- tional	14	5.9%	6	-	-	8.5	2.5	6.25	.343
Scientific	11	4.7%	8	7	11.2%	3.0	5.0	25.00	
Persuasive	21	8.9%	4.5	11	18.0%	2.0	2.5	6.25	t=1.033
Artistic	30	12.7%	2.0	-	-	8.5	6.5	42.25	
Literary	12	5.0%	7.0	3	5.0	6.0	1.0	1.00	
Musical	102	43.0%	1.0	5	8.0%	4.0	3.0	9.0	
Social	-	-	10.0	-	-	8.5	1.5	2.25	
Clerical	2	1.0%	9.0	-	-	8.5	0.5	0.25	
<hr/>									

238

62

It would be noticed in table 4.4 that the rank difference correlation worked out between the ranks assigned to various



# PERCENTAGE OF PUPILS HAVING DOMINANT INTERESTS IN VARIOUS VOCATIONAL AREAS

UNIT: FIVE SMALL SQUARES = 1%

PERCENTAGE

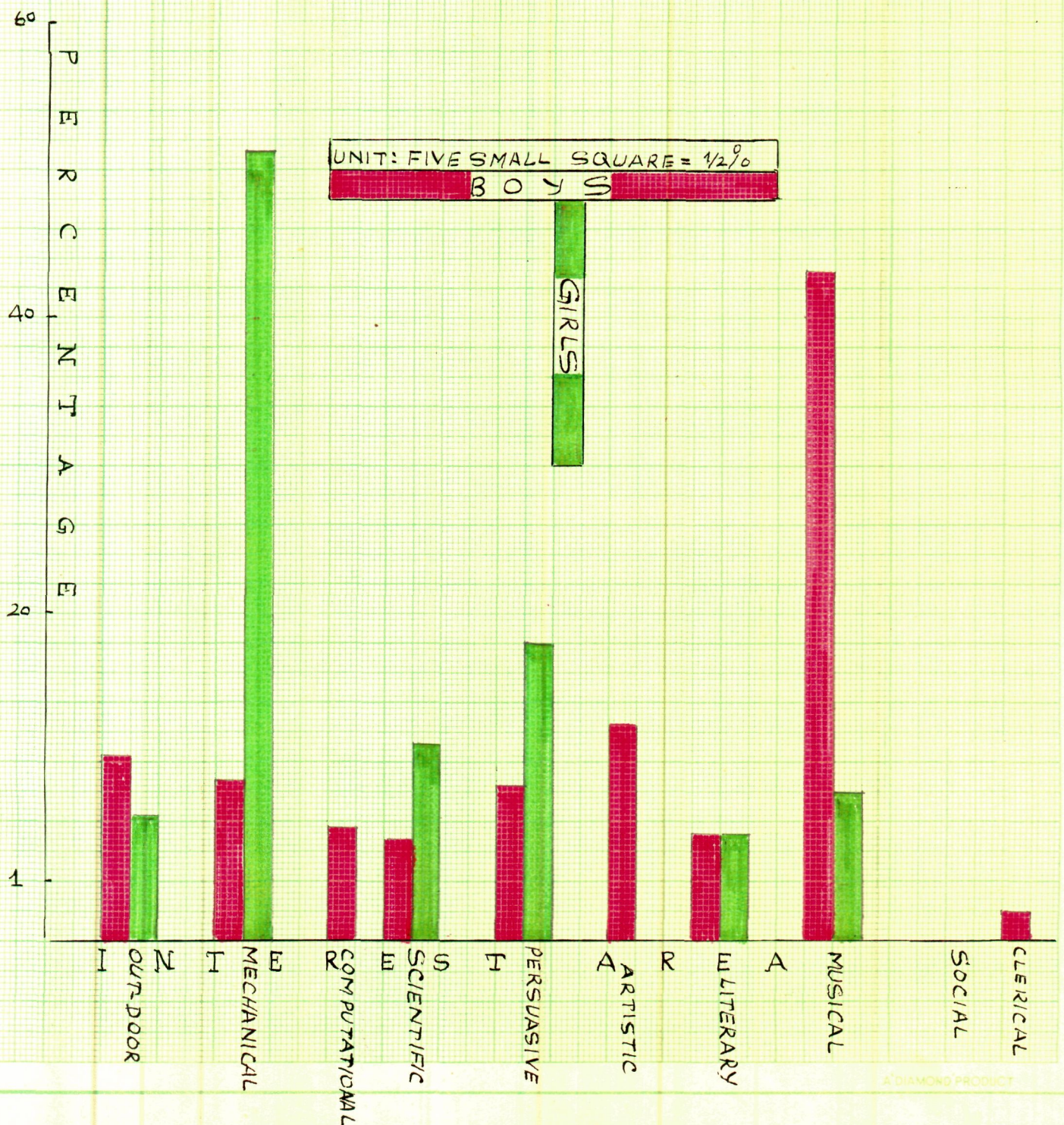
BOYS  
GIRLS

INTEREST AREA

INTEREST AREA	BOYS (%)	GIRLS (%)
OUT-DOOR	6	2
MECHANICAL	5	0
COMPUTATIONAL	15	6
SCIENTIFIC	8	2
PERSUASIVE	4	1
ARTISTIC	1	11
LITERARY	5	1
MUSICAL	1	11
SOCIAL	27	42
CLERICAL	24	19



# PERCENTAGE OF PUPILS HAVING LEAST INTERESTS IN VARIOUS VOCATIONAL AREAS





vocational interests areas of boys and girls comes to be .25. Significance of this correlation as found through calculation of t value . The value of t comes to be .730 which is far below the value 2.306 to make the correlation significant at .05 level. This means that there is no relationship between the dominant interest areas of boys and girls.

A further look in the same table shows that whereas social and clerical areas enjoy the same ranks in case of both sexes, there is much divergence in respect of other areas.

The hypotheses of no difference in the dominant interests of boys and girls is therefore clearly found untenable.

The same result is obtained when areas of least interest of boys and girls are compared. An examination of table 4.5 shows that the rank difference correlation has a value of .343. The corresponding t value is 1.033 which, again, is much less than 2.306 to



make the correlation significant at .05 level with 8 degrees of freedom. Thus it is found that there is no agreement between boys and girls in regard to the areas of least interests. The contents of table 4.5 reveal that boys have least interest in musical and artistic areas; girls are, on the other hand, least interested in mechanical and persuasive areas. Again, girls have very little interest in scientific area whereas boys do not dislike this area so much.

This results are in the expected direction in view of the known social roles of boys and girls about which the pupils of the two sexes seem to be quite aware. There is no wonder, therefore, if the differences in vocational interests of boys and girls are found to exist.

D- Comparision of dominant interests on the basis of school-class.

In the following tables 4.6, and 4.7, percentage of students having dominant interests and least interests in various occupational areas has been given in respect of boys of XII and X Classes separately. Hypothesis 3 of the

study assumes that there is no substantial difference in vocational interests of pupils on the basis of difference in class during late adolescence.

TABLE 4.6  
Comparison among XII and X class boys in regard to the  
areas of their dominant interest.

Interest	C L A S S						d	d <sup>2</sup>	Who
	No.	Perc.	Rank	No.	Perc.	Rank			
Outdoor	9	5.5%	5.5	7	9.5%	5	.5	.25	
Mechanical	8	5.0%	7	5	6.4%	6	1.0	1	
Computational	24	14.5%	3	11	14.2%	4	1	1	
Scientific	9	5.5%	5.5	12	15.5%	3	2.5	6.25	
Persuasive	7	4.5%	8	4	5.0%	7	1	1	
Artistic	3	1.9%	9.5	1	1.3%	9.5	0	0	
Literary	11	6.8%	4	2	2.5%	8	4	16	.97
Musical	3	1.9%	9.5	1	1.3%	9.5	0	0	Significant
Social	46	29.0%	1	18	23.3%	1	0	0	.1 level
Clerical	41	25.5%	2	16	20.7%	2	0	0	
Total	161			77					

TABLE 4.7

Comparison among XII and X class boys in regard to the area of their least interest . Percentage of students having least interest in different areas.

Interest area	C L A S S								
	XII			X			d	d <sup>2</sup>	Rho
	No.	Per.	Rank	No.	Per.	Rank			
Outdoor	19	12%	3	6	7.8%	6	3	9	
Mechanical	10	6.5%	5	11	10.5%	3	2	4	
Computa- tional	7	4.5%	7	7	9.5%	4.5	2.5	6.5	
Scientific	9	5.5%	6	2	2.5%	8	2	4	
Persuasive	17	10.5%	4	4	5%	7	3	9	.98
Artistic	21	13%	2	9	11.6%	2	0	0	Sig. .01 Level
Literary	5	3.1%	8	7	9.5	4.5	3.5	12.25	
Musical	71	44.4%	1	31	40.2%	1	0	0	
Social	-	-	10	-	-	9.5	.5	.25	
Clerical	2	1.3%	9	-	-	9.5	.5	.25	
Total	161			77					

The rank difference correlation computed between various interest areas ranked on the basis of percentages of students having dominant interest in each

area as given in table 4.6 comes to be .97 which is highly significant at .01 level.

The rank difference correlation computed between areas of least interests of XII and X class boys and girls in table 4.7 is .98. This value is also much higher than the value of  $R_{hp}$  required for significance at .01 level.

From both those analyses it is inferred that class difference during late adolescence is not a basis of difference in vocational interests of boys.

Since the sample contained only one class of girls, it was not possible to make analysis of this type of the data of girls. However, one can assume with some amount of confidence that the same picture would have emerged in the case of girls too.

The finding arrived at this study appears to be in agreement with previous researches which have found very little change in vocational interests during late adolescence. According to them the process of stabilization begins with the onset of adolescence.

Here it may be admitted that the sample constituting class X and XII is cross sectional which does not lend itself to longitudinal type of study which could have been best for investigating, change in vocational interests.

To this extent the findings reached in the study have to be accepted with some reservation.

E- Comparison of dominant interests on the basis of parents' occupation.

In the tables from 4.8 to 4.13 areas of dominant and least interests of the total sample (4.8 and 4.9), boys, (4.10 and 4.11) and girls (4.12 and 4.13) are analysed on the basis of their parents' occupation. In each table subjects have been distributed according to the area of dominant interests and parents' occupation. The rank of each of the ten areas is determined separately for each occupational group. Using the technique of Kendall's Coefficient of Concordance the extent of agreement in ranking the ten areas of

least interest. The results of this analysis are

given below:  
**TABLE 4.8**  
Comparison of areas of dominant interest of the sample  
n=300 on the basis of their parents' occupations.

Interest area	Occupation			RANK gr.I	RANK gr. II	RANK gr. III	Sum of RANK	d	d <sup>2</sup>	V
	Agri. gr.I	Ser. gr.II	Bus. gr.III							
Outdoor	9	1	6	6	9.5	4.5	20	3.5	12.25	
Mechanical	9	4	1	6	6.5	8	20.5	4	16	
Computational	23	8	7	3	3	3	9	7.5	56.25	0.78
Scientific	9	6	6	6	4.5	4.5	15	1.5	2.25	
Persuasive	7	4	3	8	6.5	6	20.5	4	16	
Artistic	3	6	2	9	4.5	7	20.5	4	16	
Literary	10	3	-	4	8	9.5	21.5	5	25	
Musical	2	1	-	10	9.5	9.5	29	12.5	156.25	
Social	30	44	15	2	1	1	4	12.5	156.25	
Clerical	47	22	12	1	2	2	5	11.5	132.25	
Total	149	99	52	55	55	55	$\frac{165}{10}$		588.50	
										=16.5

$$V = \frac{12 \sum d^2}{m^2 (n^2 - 1)} = \frac{12 \times 588.50}{9 \times 10 \times 99} = 0.78$$

$$\chi^2 = K (N - 1) V = 3 \times 9 \times .78 = 21.06 \quad \text{Sig. at .05 Level}$$

TABLE 4.9

Comparison of areas of least interest of the sample on the basis of their parents' occupations.

N=300

Interest area	Occupation			RANK gr.I	RANK gr. II	RANK gr. III	Sum of d RANK	d	d <sup>2</sup>	v
	Agri. gr.I	Serv. gr.II	Business gr.III							
Outdoor	18	6	4	3	4	4	11	5.5	30.25	
Mechanical	6	30	16	5.5	2	2	9.5	7	49	
Computational	5	5	3	7	5.5	6	18.5	2	4	
Scientific	6	4	2	5.5	7	7	19.5	3	9	.80
Personality	14	9	1	4	3	8	15	1.5	2.25	
Artistic	19	5	4	2	5.5	4	11.5	5	25	
Literary	4	1	4	8	8	4	20	3.5	12.25	
Musical	76	39	10	1	1	1	3	13.5	182.25	
Social	-	-	-	10	9.5	9.5	29	12.5	156.25	
Clerical	1	-	-	9	9.5	9.5	28	11.5	132.25	
Total	149	99	52	55	55	55	<u>165</u> 10		602.5	

$$W = \frac{12 \sum d^2}{n(n^2 - 1)} = \frac{12 \times 602.5}{9 \times 10 \times 99} = .8$$

$$X^2 = K^2 \left( \frac{n}{n^2 - 1} \right) W = 3 \times 9 \times .8 = 21.60$$

Significant at .05 level

TABLE 4.10

Comparison of areas of dominant interest of boys on the basis of their parents' occupations

N=238

Interest area	Occupation			RANK			Sum of RANK	d	d <sup>2</sup>	W
	Agri. gr. I	Service gr. II	Business gr. II	gr. I	gr. II	gr. III				
Outdoor	9	1	4	6	8.5	5	19.5	3	9	
Mechanical	9	4	1	6	5	7	18	1.5	2.25	
Computational	23	7	5	3	3	4	10	6.5	42.25	
Scientific	9	4	6	6	5	3	14	2.5	6.25	
Persuasive	7	4	2	8	5	6	19	2.5	6.25	.84
Artistic	2	1	-	9.5	8.5	9	27	10.5	110.25	
Literary	10	3	-	4	7	9	20	3.5	12.5	
Musical	2	-	-	9.5	10	9	28.5	12	144	
Social	28	21	10	2	1	1	4	12.5	156.25	
Clerical	46	11	9	1	2	2	5	11.5	132.25	
Total	145	56	37	55	55	55	<u>165</u> 10 =16.5	d <sup>2</sup> 621		

$$W = \frac{12 d^2}{n^2 (n^2 - 1)} = \frac{12 \times 621}{9 \times 10 \times 99} = .84$$

$$K^2 = K (n - 1) W = 3 \times 9 \times .84 = 22.68$$

Significant at .01 level



TABLE 4.11

Comparison of areas of least interest of boys on  
the basis of their parents' occupations.

N=238

Interest area	Occupation			RANK Gr. I	RANK Gr. II	RANK Gr. III	Sum of RANK	d	d <sup>2</sup>	V
	Agri. gr. I	Serv. gr. II	Business gr. III							
Outdoor	18	3	3	3	5.5	5.5	14	2.5	6.25	
Mechanical	5	6	7	6.5	2	2	10.5	6	36	
Computa- tional	5	3	3	6.5	5.5	5.5	17.5	1	1	
Scientific	6	2	1	5	7	7	19	2.5	6.25	.75
Persuasive	12	5	-	4	3.5	9	16.5	0	0	
Artistic	19	5	4	2	3.5	3.5	9	7.5	56.25	
Literary	4	1	4	8	8	3.5	19.5	3	9	
Musical	75	31	15	1	1	1	3	13.5	182.25	
Social	-	-	-	10	9.5	9	28.5	12	144	
Clerical	1	-	-	9	9.5	9	27.5	11	121	
Total	145	56	37	55	55	55	<u>165</u>		d <sup>2</sup>	
							N 10		=562	
							=16.5			

$$V = \frac{12 d^2}{n^2 (n^2 - 1)} = \frac{12 \times 562}{9 \times 10 \times 99} = .75$$

$$X^2 = \frac{K (N - 1) V}{1} = 3 \times 9 \times .75 = 20.25$$

Significant at .05 level

TABLE 4.12

Comparison of areas of dominant interest of girls on the basis of their parents' occupations.

11-62

Interest area	Occupation			RANK gr. I	RANK gr. II	RANK gr. III	Sum of RANK	d	d <sup>2</sup>	V
	Agri. gr. I	Service gr. II	Buso. gr. III							
Outdoor				2	7	8.5	4	19.5	3	9
Mechanical				-	7	8.5	8.5	24	7.5	56.25
Computational				2	7	5.5	4	16.5	0	0
Scientific				-	7	4	8.5	19.5	3	9
Persuasive				1	7	8.5	6	21.5	5	25
Artistic	1			2	2.5	3	4	9.5	7	49
Literary				-	7	8.5	8.5	24	8.5	72.25
Musical				-	7	5.5	8.5	21	4.5	20.25
Social	2	23		5	1	1	1	3	13.5	182.25
Clerical	1	11		3	2.5	2	2	6.5	10	100
Total	4	43	15	55	55	55				
								$\bar{R} = \frac{165}{10}$		
								= 16.5		
									d <sup>2</sup> = 523	

$$W = \frac{12 d^2}{n^2 (n(n^2 - 1))} = \frac{12 \times 523}{9 \times 10 \times 99} = .70$$

$$X^2 = K(N - 1)W = 3 \times 9 \times .70 = 18.90$$

Significant at .05 level

TABLE 4.13

Comparison of areas of least interest of girls on the basis of the parents' occupations.

N=62

Interest area	Occupation			RANK		RANK	Sum of RANK	d	d <sup>2</sup>	W
	Agri. gr.I	Serv. gr.II	Bus. gr.III	gr. I	gr. II	gr. III				
Outdoor		3	1	7	4	4	15	1.5	2.25	
Mechanical	1	24	9	2.5	1	1	4.5	12	144	
Computational	-	2	-	7	5.5	8	20.5	4	16	.71
Scientific	-	2	1	7	5.5	4	16.5	0	0	
Persuasive	2	4	1	1	3	4	8	8.5	72.25	
Artistic	-	-	-	7	8.5	8	23.5	7	49	
Literary	-	-	-	7	8.5	8	23.5	7	49	
Musical	1	8	3	2.5	2	2	6.5	10	100	
Social	-	-	-	7	8.5	8	23.5	7	49	
Clerical	-	-	-	7	8.5	8	23.5	7	49	
TOTAL	4	43	15		55	55	$\frac{165}{10} = 16.5$		530.5	

$$W = \frac{12 d^2}{n^2 (n^2 - 1)} = \frac{12 \times 530.5}{9 \times 10 \times 99} = .71$$

$$X^2 = K(N - 1)W = 3 \times 9 \times .71 = 18.90$$

Significant at .05 level

The data analysed in the above tables shows that

there is significant degree of relationship in the

ranking of areas of both dominant interest and least interest between the pupils belonging to parents of all the three occupations. In order to facilitate instant comparison the results are summarized below.

TABLE 4.14

Summary of results of relationship in ranking of areas of dominance interest and least interest of various groups of students on the basis of their parents' occupations.

Group	Type of interests	Coefficient of Concordance	$\chi^2$	Significance level
Total sample N=300	Dominant Interest areas, Least Interest areas.	0.78 .80	21.06 21.60	.05 .05
Boys N=238	Dominant Interest areas. Least Interest areas.	.84 .75	22.68 20.25	.01 .05
Girls N=62	Dominant Interest Areas. Least Interest areas.	.70 .71	18.90 18.90	.05 .05

The summary of results makes it clear that

1) ranking of dominant interest areas by three hundred (300) students divided into three occupational groups is significantly related (2) ranking of areas of least interest is also significantly related, (3) ranking done by boys ( $N=238$ ) is also significantly related and (4) ranking by girls is also significantly related.

It would be taken to mean that dominant interest areas as well as areas of least interest are ordered in similar fashion by the three groups of students categorized on the basis of their parents' occupations. In other words pupils are not influenced by their parents' occupations in their vocational preferences. The absence of this influence is apparent in case of both boys as well as girls.

In the light of the above results hypothesis 4 of the study which says that the occupations of parents do not affect dominant interest patterns of Secondary School students is found to stand.

F- Comparision of dominant interests on the basis  
of parents' education.

In the tables from 4.15 to 4.20 areas of dominant and least interests of the total sample (4.15 and 4.16), boys (4.17 and 4.18) and girls (4.19 and 4.20) are analysed on the basis of their parents' education. In each table subjects have been distributed according to the area of dominant interests and parents' education. Then rank of each of the ten areas is determined seperately for each educational group. Using the technique of Kendall's Coefficient of correlation, the extent of agreement in ranking the ten areas of dominant interest by the 6 groups was found. The same procedure was adopted in case of areas of least interest. The results of this analysis are given below.

TABLE NO. 4.15

Comparison of areas of dominant interest of the sample on the basis of their parents' education

N=300

Interest area	Parents' Education Level												d <sup>2</sup>	
	Gr. I to Gr. VI						Gr. I to Prof- essional							
	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. VI	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. VI	RANK	RANK SUEI of RANK
Outdoor	-	1	2	3	9	1	8	5.5	8	5.5	4	4.5	35.5	6.25
Mechanical	-	-	4	4	7	2	8	9	7	4	6	2.5	36.5	12.25
Computational	-	3	11	6	20	3	8	3	3	3	3	2.5	22.5	110.25
Scientific	1	1	9	2	8	1	4	5.5	4	7	5	4.5	30.0	9.0
Persuasive	-	-	6	3	5	-	4	9	5.5	5.5	8	8	40.0	49.0
Artistic	1	1	6	1	2	-	4	5.5	5.5	8	9.5	8	40.5	42.25
Literary	2	1	1	-	6	-	2	5.5	9	9.5	7	8	41.0	64.0
Musical	-	-	-	-	2	-	8	9	10	9.5	9.5	8	54.0	441.0
Social	6	9	30	11	25	7	1	1	1	2	2	1	25.0	625.0
Other	-	5	29	16	27	-	8	2	2	1	1	8	22.0	121.0
Total	11	21	98	46	111	13	55	55	55	55	55	55	230	d <sup>2</sup> = 1480

$$\chi^2 = K(n-1)U = 6 \times 9 \times .49 = 26.46$$

$$U = \frac{12nd^2}{m^2(n^2 - 1)} = \frac{12 \times 1480}{36 \times 10 \times 99} = .49$$

Significant at .01 Level

Abbreviations have been explained here

TABLE 4.16

Comparison of areas of least interest of the sample on the basis of their parents education

N=300

Interest area	Parents' Education												Sum of d <sup>2</sup>
	P.G. Gr. I	Grad. Gr. II	H.Sch. Gr. III	Below Un. Gr. IV	Un. Gr. V	Prof. Gr. VI	RANK Gr. I	RANK Gr. II	RANK Gr. III	RANK Gr. IV	RANK Gr. V	RANK Gr. VI	
Outdoor	-	1	8	5	9	-	8	6.5	4	3.5	3	7	32 1.0
Mechanical	1	5	24	5	5	5	3.5	2	2.5	3.5	6.5	1.5	19 196.0
Computational	1	-	6	2	4	-	3.5	9	5	6	8	7	38.5 30.25
Scientific	-	1	5	1	7	-	8	6.5	6.5	7	4.5	7	39.5 42.25
Persuasive	1	2	11	4	7	3	3.5	4	3	5	4.5	3	23.0 100.0
Artistic	1	2	5	7	13	-	3.5	4	6.5	2	2	7	25.0 64.0
Literary	-	2	1	-	5	-	8	4	8	9	6.5	7	42.5 90.25
Musical	7	8	38	22	61	5	1	1	1	1	1	1.5	6.5 702.25
Social	-	-	-	-	-	-	8	9	9.5	9	9.5	7	52.0 361.0
Clerical	-	-	-	-	-	-	8	9	9.5	9	9.5	7	52.0 361.0
Total	11	21	98	46	111	13							330 1949
													$\frac{330}{10} = 33$

$$X^2 = K (n - 1) V = 6 \times 9 \times .65 = 35.01$$

$$V = \frac{12 \times d^2}{m^2 (n(n^2 - 1))} = \frac{12 \times 1949}{36 \times 10 \times 99} = .65$$

Significant at .01 level



TABLE 4.17

Comparison of areas of dominant interest of boys on the basis of their parents education

N=238

Interest area	Parents Education						Sum of d <sup>2</sup>							
	P.G. Gr. I	Grad. Gr. II	H.Sch. Gr. III	H.Sch. Gr. IV	Un-Edu. Gr. V	Prof. Gr. VI	RANK Gr. I	RANK Gr. II	RANK Gr. III	RANK Gr. IV	RANK Gr. V	RANK Gr. VI		
Outdoor	-	1	1	3	9	1	8	4	7.5	5.5	4	3.5	32.5	.25
Mechanical	-	-	4	4	7	-	8	8	6	4	6	7.5	39.5	42.25
Computational.	-	3	7	6	20	2	8	2	3.5	3	3	2	21.5	132.25
Scientific	1	1	7	2	8	1	4	4	3.5	7	5	3.5	27.0	36.0
Persuasive	1	-	5	3	5	-	4	8	5	5.5	8	7.5	38.0	25.0
Artistic	1	-	1	-	2	-	4	8	7.5	9	9.5	7.5	45.5	156.25
Literary	2	1	-	-	6	-	2	4	9.5	9	7	7.5	39.0	36.0
Physical	-	-	-	-	2	-	8	8	9.5	9	9.5	7.5	51.5	342.25
Social	5	6	14	9	24	4	1	1	2	2	2	1	9.0	576.0
Clorical	-	-	19	14	26	-	8	8	1	1	1	7.5	26.5	42.25
Total	10	12	58	41	109	8							330	1388.5
													10	
														=33

$$\chi^2 = K(n-1)U$$

$$= 6 \times 9 \times .46 = 24.84$$

$$U = \frac{12 \sum d^2}{n^2}$$

$$= \frac{12 \times 1388.5}{36 \times 10 \times 99} = .46$$

$$n^2 (n^2 - 1)$$

Significant at .01 level

TABLE 4.18

Comparison of areas of of Least Interest of boys on the basis of their parents education

N=238

Interest Area	Parents Education					RANK RANK RANK RANK RANK						SUM of RANK	d <sup>2</sup>	
	P-g. Grad.	H.Sch.	Below Un-Adm.	Prof-ess.	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. VI				
	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. IV	Gr. III	Gr. II	Gr. I	Gr. VI				
Outdoor	-	1	1	3	9	1	8	4	7.5	5.5	4	3.5	32.5	.25
Mechanical	-	-	4	4	7	-	8	8	6	4	6	7.5	39.5	42.25
Computational	-	3	7	6	20	2	8	2	3.5	3	3	2	21.5	132.25
Scientific	1	1	7	2	8	1	4	4	3.5	7	5	3.5	27.0	36.0
Persuasive	1	-	5	3	5	-	4	8	5	5.5	8	7.5	38.0	25.0
Artistic	1	-	1	-	2	-	4	8	7.5	9	9.5	7.5	45.5	156.25
Literary	2	1	-	-	6	-	2	4	9.5	9	7.0	7.5	39.0	36.0
Musical	-	-	-	-	2	-	8	8	9.5	9	9.5	7.5	51.5	342.25
Social	5	6	14	9	24	4	1	1	2	2	2	1	9.0	576.0
Clerical	-	-	19	14	26	-	8	8	1	1	1	7.5	26.5	42.25
Total	10	12	58	41	109	8							330	1388.5
													10	
														=33

$$\chi^2 = K(n-1) \frac{V}{\sum d^2} = 6 \times 9 \times .46 = 24.84$$

$$V = \frac{\sum d^2}{n(n-1)} = \frac{12 \times 1388.5}{36 \times 10 \times 99} = .46$$

Significant at .01 Level

TABLE 4.19

Comparison of areas of dominant interest of the girls on the basis of their parents education

N=62

Interest area	Parents Education										Sum of RANK	d <sup>2</sup>		
	P.O.	Gred.	H.Sch.	Below & Inter H.Sch.	Un-Edu.	Prof. ess.	RANK	RANK	RANK	RANK				
	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. VI	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. VI		
1.Outdoor	-	-	1	-	-	-	6	7	7	7	6.5	6.5	40.0	49
2.Musical	-	-	-	-	-	2	6	7	9.5	7	6.5	2	38	25
3.Computational	-	-	4	-	-	-	6	7	4	7	6.5	6.5	37.0	16
4.Scientific	-	-	2	-	-	-	6	7	5	7	6.5	6.5	38.0	28
5.Persuasive	-	-	1	-	-	-	6	7	7	7	6.5	6.5	40.0	49
6.Artistic	-	4	3	1	-	-	6	3	3	3	6.5	6.5	28.0	25
7.Literary	-	-	1	-	-	-	6	7	7	7	6.5	6.5	40.0	49
8.Musical	-	-	-	-	-	-	6	7	9.5	7	6.5	6.5	42.5	90.25
9.Social	1	3	16	2	1	3	1	2	1	1.5	1.5	1	8.0	625.0
10.Clerical	-	5	10	2	1	-	6	1	2	1.5	1.5	6.5	18.5	210.25
Total	1	9	40	5	2	5							230	1163.5
													10	
													33	

$$\chi^2 = K(n-1)W = .6 \times 9 \times .39 = 21.06$$

$$W = \frac{12ed^2}{n^2(n^2 - 1)} = \frac{12 \times 1163.5}{36 \times 10 \times 99} = .39$$

Significant at .05 Level

TABLE 4.20

Comparison of areas of least interest of the girls on the basis of their parents education

N=62

Interest area	Parents Education										Sum of RANK	d <sup>2</sup>		
	P.C. Gr. I	Grad. H.Sch. Gr. II	Below Un-Ed. Gr. III	Prof. H.Sch. Gr. IV	Gr. V	Gr. VI	RANK I	RANK II	RANK III	RANK IV				
	gr. I	gr. II	gr. III	gr. IV	gr. V	gr. VI	gr. I	gr. II	gr. III	gr. IV	gr. V	gr. VI		
1.Outdoor	-	1	1	-	-	-	6	3	6	7	6.5	6.5	35.0	4.0
2.Mechanical	-	5	14	2	1	2	6	1	1	1.5	1.5	2	13.0	400.0
3.Computational	-	-	1	-	-	-	6	7	6	7	6.5	6.5	39.0	36.0
4.Scientific	-	-	3	-	-	-	6	7	4	7	6.5	6.5	37.0	16.0
5.Persuasive	-	-	7	1	1	3	6	7	3	3	1.5	1	21.5	132.25
6.Artistic	-	-	-	-	-	-	6	7	9	7	6.5	6.5	42.0	81
7.Literary	-	-	1	-	-	-	6	7	6	7	6.5	6.5	39.0	36
8.Musical	1	3	13	2	-	-	1	2	2	1.5	6.5	6.5	19.5	182.25
9.Social	-	-	-	-	-	-	6	7	9	7	6.5	6.5	42.0	81.0
10.Clerical	-	-	-	-	-	-	6	7	9	7	6.5	6.5	42.0	81.0
Total	1	9	40	5	2	5							330	1049.5
													10	
														=33

$$\chi^2 = K(n-1)U = 6 \times 9 \times .35 = 18.90$$

$$U = \frac{12 \sum d^2}{n^2} = \frac{12 \times 1049.5}{36 \times 10 \times 99} = .35$$

Significant at .01 level

The data analysed in the above tables shows that there is significant degree of relationship in the ranking of areas of both dominant interest and least interest between the pupils belonging to different levels of parents' education. In order to facilitate instant comparison the results are summarised below:

TABLE 4.21

Summary of results of relationship in ranking of areas of dominant interest and least interest of various groups of students on the basis of their parents' education.

Group	Type of interest	Coefficient of concordance	$\chi^2$	Significance level
Total sample	Dominant Interest	.49	26.46	.01
N=300	Least Interest	.62	33.48	.01
Boys	Dominant Interest	.46	24.84	.01
N=238	Least Interest	.54	28.16	.01
Girls	Dominant Interest	.39	21.06	.05
N=62	Least Interest	.35	18.80	.05

The summary of results makes it clear that (1) ranking of dominant interest areas by 300 students divided into six groups on the basis of parents' education is significantly related, (2) ranking of areas of least interest is also significantly related (3) ranking done by boys (N=238) is also significantly related and (4) ranking of girls is also significantly related.

It would be taken to mean that dominant interest areas as well as areas of least interest are ordered in similar fashion by the 6 groups of students categorized on the basis of their parents' education. In other words subjects of the study are not influenced by parents' level of education in their vocational preferences. The absence of this influence is apparent in case of both boys as well as girls.

In the light of the above results hypothesis 5 of the study which says that the education of parents does not affect dominant interest pattern of secondary school students is found to stand.

C-Comparision of dominant interests on the basis of  
parents' income.

In the tables from 4.22 to 4.27, areas of dominant and least interest of the total sample(4.22 and 4.23), boys (4.24 and 4.25) and girls(4.26 and 4.27) are analysed on the basis of their parents' income. In each table subjects have been distributed according to the area of dominant interest and parents' income. Then rank of each of the ten areas is determined seperately for each income group. Using the technique of Kendall's coefficient of concordance the extent of agreement in ranking the ten areas of dominant interest by the five income groups was found. The same procedure was adopted in case of areas of least interest. The results of this analysis are given below

TABLE 4.22

Comparison of the areas of dominant interest of the sample on the basis of their parents income  
N=300

Interest area	Parents Income					RANK P.T. of RANK					Sum of RANK	d <sup>2</sup>	Dominant
	1-200	201-400	401-600	601-800	801-1000	I	II	III	IV	V			
Outdoor	5	5	3	2	-	8	4	5.5	2	8.5	28.0	.25	
Mechanical	6	3	1	-	-	5.5	5.5	8.5	8	8.5	36.0	72.25	
Computational	21	6	7	1	1	3	3	4	4	4.5	18.5	81	
Scientific	6	2	9	1	1	7	7	3	4	4.5	25.5	4	
Persuasive	8	1	3	-	1	5.5	8.5	5.5	8	4.5	32.0	20.25	
Artistic	3	3	2	1	-	9	5.5	7	4	8.5	34.0	42.25	
Literary	9	-	1	-	1	4	10	8.5	8	4.5	35.0	56.25	
Musical	-	1	-	-	-	10	8.5	10	8	8.5	45.0	200.25	
Social	32	31	24	9	4	2	1	1	1	1.5	6.5	400.0	
Clerical	43	21	14	-	4	1	2	2	8	1.5	14.5	169.0	
Total	135	75	64	14	12						N=272 10	1045.5	

$$\begin{aligned}
 \chi^2 &= K(n-1)W = 3 \times 9 \times .508 = 22.36 \\
 W &= \frac{12sd^2}{25 \times 10 \times 99} = \frac{12 \times 1045.5}{25 \times 10 \times 99} = \frac{12546}{24750} = .508
 \end{aligned}$$

Significant at .01 Level



TABLE 4.23

N=300

Interest area	Parents Income												Least
	1-200	201-400	401-600	601-800	801-1000	RANK gr. I	RANK gr. II	RANK gr. III	RANK gr. IV	RANK gr. V	Sum of RANK	d <sup>2</sup>	
Outdoor	14	4	-	-	1	2.5	4.5	9	8	3.5	27.5	0	
Mechanical	9	20	9	5	4	5	2	2	1	2	12.0	230.25	
Computational	22	3	2	-	-	7	6	6.25	8	7.5	35.0	56.25	
Scientific	5	1	3	1	-	6	7	5	4.5	7.5	30.0	6.25	
Persuasive	11	6	8	4	-	4	3	3	2	7.5	19.5	64	
Artistic	14	4	6	1	1	2.5	4.5	4	4.5	3.5	19.0	72.25	
Literary	-	-	2	-	-	9	9	6.5	8	7.5	40.0	156.25	
Musical	60	37	34	3	6	1	1	1	3	1	7.0	420.25	
Social	-	-	-	-	-	9	9	9	8	7.5	42.5	225.0	
Clerical	-	-	-	-	-	9	9	9	8	7.5	42.5	225.0	
Total	155	75	64	14	12	$\frac{272}{10} = 27.2$					1455.5		

$$X^2 = K(n-1)U = 5 \times 9 \times .705 = 31.72$$

$$U = \frac{12 \sum d^2}{n^2(n-1)} = \frac{12 \times 1455.5}{25 \times 10 \times 99} = \frac{17466}{24750} = .705$$

Significant at 01 Level.

TABLE 4.24

Boys N=258		Parents income										Dominant	
Interest areas		1-200 \$1. 201-400 \$1. 401-600 \$1. 601-800 \$1. 801-100 \$1.										Sum of RANK	d <sup>2</sup>
		I	II	III	IV	V	I	II	III	IV	V		
Outdoor	5	4	2	2	2	-	8	4	6	1.5	8.5	23	.25
Mechanical	8	3	1	-	-	-	5	5	8	7.5	8.5	34	42.25
Computational	21	8	5	5	1	1	3	3	4	3.5	4.5	18	90.25
Scientific	6	1	9	9	1	1	7	6.5	3	3.5	4.5	26.5	9.0
Persuasive	7	1	3	3	-	1	6	6.5	5	7.5	4.5	29.5	4.0
Artistic	2	-	1	1	-	-	9	9	8	7.5	8.5	42	200.25
Literary	9	-	1	1	-	1	4	9	8	7.5	4.5	33	30.25
Musical	-	-	-	-	-	-	10	9	10	7.5	8.5	45	306.25
Social	29	13	16	2	2	3	2	2	1	1.5	1.5	8	380.25
Clerical	43	15	9	-	-	3	1	1	2	7.5	1.5	13	200.25
Total	130	45	47	6	6	10	55	55	55	55	55	$\frac{275}{10}$	d <sup>2</sup> =1263

$$X^2 = R(n-1)N = 5 \pi 9 \pi .61 = 27.45$$

$$V = \frac{12 \sum d^2}{n^2(n-1)} = \frac{12 \pi 1263}{25 \pi 10 \pi 99} = \frac{15126}{24750} = .61$$

TABLE 4.25

B	Boys N=238	Parents income										Least	
		1-200	201-400	401-500	601-800	801-1000	RANK	RANK	RANK	RANK	RANK	Sum	$\chi^2$
Interest		Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	of	
area												RANK	
Outdoor	14	4	-	-	4	4	2.5	3.5	9	7	3.5	25.5	4.0
Mechanical	7	6	1	-	2	2	5	2	7	7	2	23.0	20.25
Computational	2	2	2	-	-	-	7	5	5	7	7.5	31.5	16
Scientific	5	-	2	-	-	-	6	8.5	5	7	7.5	34.0	42.25
Persuasive	10	1	5	2	-	-	4	6	3	2	7.5	22.5	25
Artistic	14	4	6	1	1	1	2.5	3.5	2	3	3.5	14.5	169.0
Literary	-	-	2	-	-	-	9	8.5	5	7	7.5	37.0	90.25
Musical	78	28	29	3	6	1	1	1	1	1	1	5.0	506.25
Social	-	-	-	-	-	-	9	8.5	9	7	7.5	41.0	182.25
Clerical	-	-	-	-	-	-	9	8.5	9	7	7.5	41.0	182.25
Total	130	45	47	6	10	59	55	55	55	55	55	275	1237.5
												$\frac{275}{10}$	=27.5

$$\chi^2 = K(n-1)U = 5 \times 9 \times .60 = 27$$

$$U = \frac{12 \sum d^2}{n^2(n-1)} = \frac{12 \times 1237.5}{25 \times 10 \times 99} = \frac{14750}{24750} = .60$$

Significant at .01 level.

TABLE 4.26

Comparison of areas of dominant interest of girls belonging to their parents of different income.

Interest area	Parents income										Sum of RANK	$d^2$
	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V		
Outdoor	-	1	1	-	-	7	5	4.5	6.5	6.5	29.5	4
Mechanical	-	-	-	-	-	7	8.5	8	6.5	6.5	36.5	81
Computational	-	-	2	-	-	7	8.5	3	6.5	6.5	31.5	16
Scientific	-	1	-	-	-	7	5	8	6.5	6.5	33.0	30.25
Persuasive	1	-	-	-	-	2.5	8.5	8	6.5	6.5	32.0	20.25
Artistic	1	3	1	1	-	2.5	3	4.5	2	6.5	18.5	81
Literary	-	-	-	-	-	7	8.5	8	6.5	6.5	36.5	81
Musical	-	1	-	-	-	7	5	8	6.5	6.5	33.0	30.25
Social	3	18	8	7	1	1	1	1	1	1.5	5.5	484
Clerical	-	6	5	-	1	7	2	2	6.5	1.5	19.0	72.25
Total	5	30	17	8	2						$\sum n = 275$	$d^2 = 900$

$$\chi^2 = K(n-1)U = 5 \times 9 \times .43 = 19.35$$

$$V = \frac{12 \sum d^2}{n^2(n^2-1)} = \frac{12 \times 900}{25(10)(100-1)} = \frac{10800}{24750} = .43$$

Significant at .05 Level.

TABLE 4.27

Comparison of areas of Least Interest of girls belonging to their parents of different income

N=62

Interest area	Parental Income										d <sup>2</sup>
	I	II	III	IV	V	Gr. I	Gr. II	Gr. III	Gr. IV	Gr. V	
Outdoor	-	-	-	-	-	7	8	7.5	7	6	64
Mechanical	2	14	8	5	2	1.5	1	1	1	1	444
Computational	-	1	-	-	-	7	4.5	7.5	7	6	16
Scientific	-	1	1	1	-	7	4.5	4	3	6	9
Persuasive	1	5	3	2	-	3	3	3	2	6	110.25
Artistic	-	-	-	-	-	7	8	7.5	7	6	64
Literary	-	-	-	-	-	7	8	7.5	7	6	84
Musical	2	9	5	-	-	1.5	2	2	7	6	81
Social	-	-	-	-	-	7	8	7.5	7	6	64
Clerical	-	-	-	-	-	7	8	7.5	7	6	64
Total	5	30	17	8	2						$\frac{274.5}{n} = 27.5$ $d^2 = 980.25$

$$\chi^2 = 21.15 \quad W = \frac{12 \sum d^2}{n^2(n-1)} = \frac{12 \times 980.25}{25(10)(100-1)} = \frac{11760}{24750} = .47$$

Significant .05

The data analysed in the above tables shows that there is significant degree of relationship in the ranking of areas of both dominant interest and least interest between the pupils belonging to parents of all the five income groups. In order to facilitate instant comparison, the results are summarized below .

TABLE 4.28

Summary of results of relationship in ranking of areas of dominant interest and least interest of various groups of students on the basis of their parents income.

Group	Type of interest	Coefficient of Concordance	$\chi^2$	Significance level
Total Sample N=300	Dominant Interest	.508	22.36	.01
	Least Interest	.705	31.72	.01
Boys N=238	Dominant Interest	.61	27.45	.01
	Least Interest	.60	27.00	.01
Girls N=62	Dominant Interest	.43	19.35	.05
	Least Interest	.47	21.15	.05

The summary of results makes it clear that (1) ranking of dominant interest areas by 300 students

divided into five income groups is significantly related (2) ranking of areas of least interest is also significantly related (3) ranking done by boys (n=238) is also significantly related and (4) ranking by girls is also significantly related.

It would be taken to mean that dominant interest areas as well as areas of least interest are ordered in similar fashion by the three groups of students categorized on the basis of their parents incomes. In other words pupils are not influenced by their parents' income in their vocational preferences. The absence of this influence is apparent in case of both boys as well as girls.

In the light of the above results hypothesis six of the study which says that the income of parents does not affect dominant interest pattern of secondary school students is found tenable.

#### H- Agreement in dominant interests of the pupils and their vocational choices.

In the following section data has been analysed in order to examine the extent of agreement in pupils' dominant interests and their vocational choices. The

has been studied in respect of boys and girls separately. It has also been studied on the basis of parents' occupation, income and education. These analyses are given in tables 4.29 to 4.32 below.

TABLE 4.29

Agreement in dominant interests and vocational choices  
of boys and girls

N=300

			Boys		Girls	
Category			N	Percentage	N	Percentage



# AGREEMENT IN DOMINANT INTERESTS AND VOCATIONAL CHOICES OF BOYS AND GIRLS

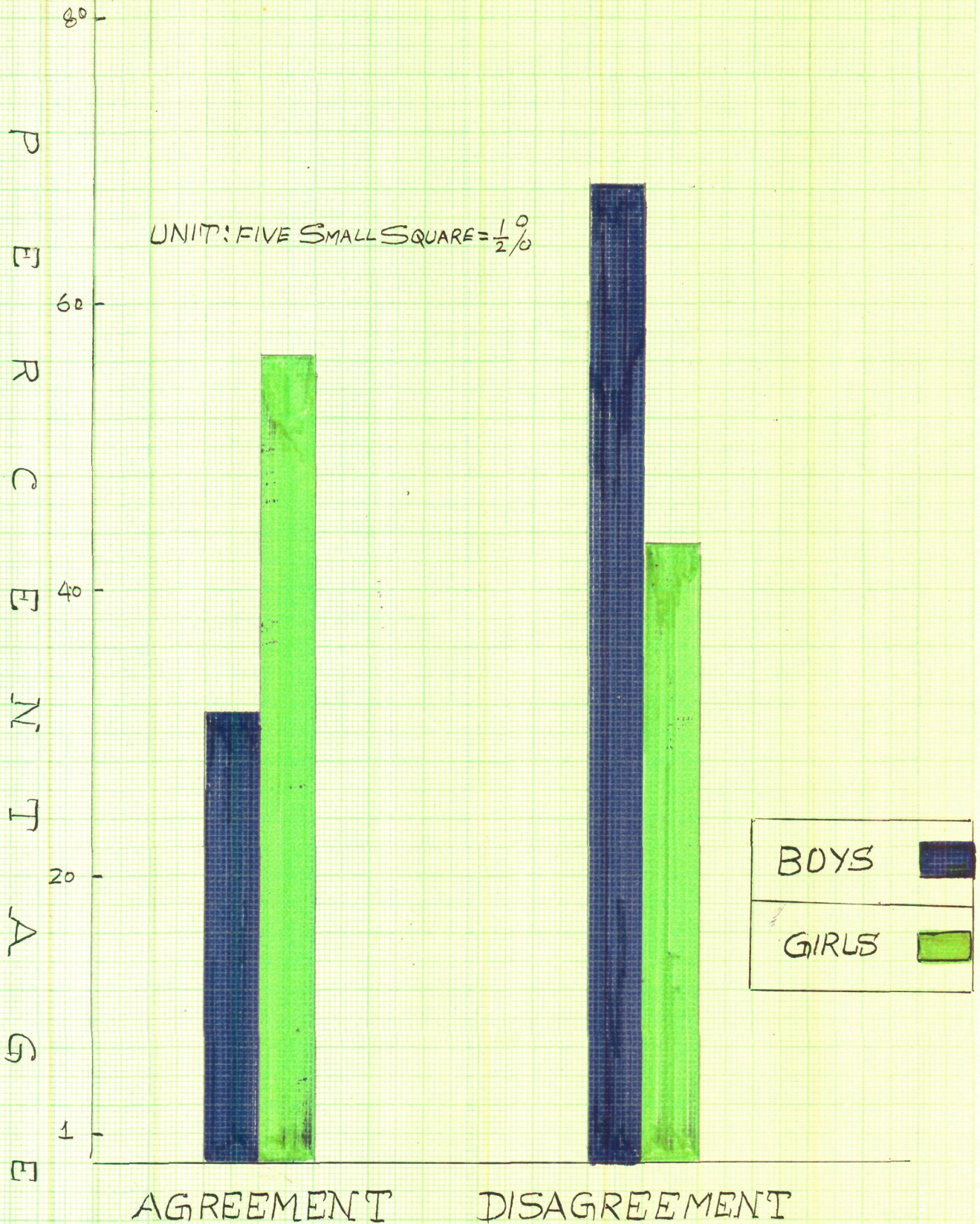




TABLE 4.30

Comparison of the agreement between dominant interest and vocational choice of pupils on the basis of their parents occupation.

Boys		Girls	
N=62		N=62	
Occupational Group	No. of cases of agreement	No. of cases of disagreement	Total
Agriculture	51 ( 45.69 )	94 ( 99.30 )	145
Service	15 ( 17.64 )	41 ( 38.35 )	56
Business	9 ( 11.65 )	28 ( 25.34 )	37
Total	75	163	238
		35	27
		62	
$\chi^2 = .617 \div .397 \div .602 \div .282 \div .103 \div .279$ $= 2.36$ N.S.		$\chi^2 = .694 \div .307 \div .251 \div .912 \div .395 \div .330$ $= 2.56$ N.S.	

Comparison of agreement between dominant interests and vocational choices of pupils on the basis of their parents education.

N=238	Boys		N=62	
Educational group	No. of cases of agreement	No. of cases of disagreement	Total	$\chi^2$
Graduate & above	7 ( 9.4 )	23 ( 20.5 )	30	15
Intermediate & H. School	20 ( 18.2 )	38 ( 39.7 )	58	8.7
Below H. Sch.	6 ( 12.9 )	35 ( 28.0 )	41	4.1
Uneducated	42 ( 34.3 )	67 ( 74.6 )	109	10.9
Total	75	163	238	62

$$\pi^2 = 6.6 \div 1.5 \div 1.7 \div 3.1 \div 7.7$$
$$X = 0.03 \div 14 \div 11 \div 67 \div 52 \div 12 \div 14 \div 87$$

$$= 2.67 \text{ H.S.}$$

Sig. at .05 level.

TABLE 4.32

Comparison of the agreement between dominant interests and vocational choices of pupils on the basis of their parents income.

N=238		N=62	
Boys		Girls	
Income Group	No. of cases of agreement	No. of cases of disagreement	Total $\chi^2$
1-200	44 ( 40.96 )	1 ( 2.82 )	130 5
201-400	10 ( 14.18 )	21 ( 16.93 )	45 30
401-600	14 ( 14.81 )	7 ( 9.59 )	47 17
601 and above	7 ( 5.42 )	6 ( 5.64 )	16 10
Total	75	35	258 62
$\chi^2 = 225 + 1.23 + .04 + .46 + .93 + .581 + .20 + .55$ $= 4.016$ N.S.		$\chi^2 = 1.17 + .98 + .70 + .03 + .015 + 1.27 + .913 + .03$ $= 5.108$ N.S.	

The information provided in tables 4.29 to 4.32 leads to the following findings:-

1) There is great disparity in percentages of boys whose dominant interests and vocational choices agree and those in whose case they do not agree. The respective percentages are 31.5 and 68.5 (table 4.29). Thus only one third of the boys are found to choose their occupation on the basis of their interests. As opposed to it, 56.4 percent of girls have agreement in their interests and choices. Thus a greater percentage of girls than boys choose their vocation by taking into account their vocational interests. It is also evident from the significance of difference calculated through 'Z' value is 2.18 which is greater than 1.96. It is significant at .05 level.

It is none-the-less a discomfoting aspect of our guidance to find that about two third of the boys and half of the girls choose such vocations in which their dominant interests do not lie.

2) When we examine the extent of agreement between

interests and choices on the basis of pupils' parents' occupation as in table 4.30, it is noted that in case of both boys and girls the values of chi squares which are respectively 2.36 and 2.56 do not reach the level of significance. This fact shows that the extent of agreement in interests and choices is independent of parents' occupation in case of boys as well as girls.

3) The data regarding extent of agreement in interests and vocational choices on the basis of parents' education is provided in table 5.31. The size of chi squares for boys and girls are respectively 8.7 and 2.67. Whereas the former value of chi square is found statistically significant at .05 level with three degree of freedom the latter value fails to reach significance level. It would be interpreted to mean that in case of boys the extent of agreement between dominant interests and vocational choices is associated with parents' educational level. This is however not so in case of girls.

4) When the data pertaining to the extent of agreement between dominant interests and vocational choices of the pupils is studied on the basis of their parents' level of income. (table 4.32) it is noted that in case of both boys as well as girls the values of chi square which are 4.016 and 5.108 respectively fall short of the required magnitude to make the results significant at .05 level with three degree of freedom.

It leads to the conclusion that the extent of agreement between dominant interests and vocational choices is not dependent on parents' level of income. Pupils of all the income groups have about the same degree of agreement in interests and choices.

TABLE 4.32A

Summary of results of comparison of various groups in regard to extent of agreement between dominant interests and vocational choices.

Basis of comparison	Results	Significance level
SEX	$Z=2.18$	.05
Parents Occupation	Boys $\chi^2=2.36$	N.S.
Parents education	Boys $\chi^2=2.36$	N.S.
	Girls $\chi^2=2.67$	N.S.
Parents Income	Boys $\chi^2=4.016$	N.S.
	Girls $\chi^2=5.108$	N.S.

I. Agreement in pupils' vocational choices and their parents' ambition.

The problem whether there is agreement in what the pupil wants to become and what his/her parents want him/her to become is studied in this section. The data relating to it is analysed in tables below:

TABLE 4.33

Agreement in vocational choice of the pupils and their parents' ambition.

$N=300$

Boys		Girls			
Category	N	Percentage	N	Percentage	Z
Agreement	186	78.15%	56	90.32%	2.57 Sig. at .05 level.
Disagreement	52	21.85	6	9.68	
Total	238	100	62	100	
$Z = \frac{P_1 - P_2}{\sqrt{\frac{s^2_{p_1} + s^2_{p_2}}{n}}} = \frac{12.17}{4.658} = 2.57$					



# AGREEMENT IN VOCATIONAL CHOICES OF THE PUPILS AND THEIR PARENTS

~~AMBITION~~  
AMBITION

P  
P  
E  
R  
C  
E  
N  
T  
A  
G  
E

UNIT: FIVE SMALL SQUARE =  $\frac{1}{2}\%$

BOYS 

GIRLS 

AGREEMENT

DISAGREEMENT

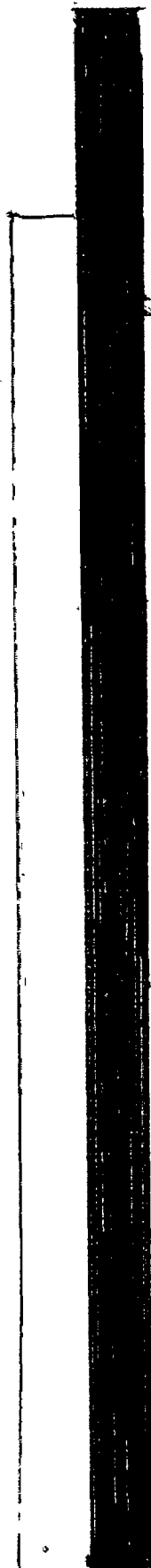


TABLE 4.34

Agreement in pupils vocational choices and their parents' ambition on the basis of their parents' occupation

N=238	Boys	N=62	Girls	
Occupational group	No. of cases of agreement	No. of cases of disagreement	No. of cases of agreement and disagreement	Total
Agriculture	108 (113.31)	37 (31.68)	145 (145.00)	4 (.58)
Services	46 (43.76)	10 (12.23)	56 (55.99)	43 (4.16)
Business	32 (28.91)	5 (8.08)	37 (36.99)	15 (1.45)
Total	186	52	238	62

$\chi^2 = .248 + .114 + .330 + .893 + .406 + 1.174$   
 $= 3.165 \text{ D.S.}$

$\chi^2 = .103 + .121 + .175 + .304 + 1.121 + 1.656$   
 $= 3.48 \text{ D.S.}$

TABLE 4.35

Agreement in vocational choice of the pupils and their parents' ambition on the basis of their parents' education.

M=238		M=62		Girls	
Vocational group	No. of cases No. of cases Total of agreement disagreement	X <sup>2</sup>	No. of cases No. of cases Total of agreement disagreement	X <sup>2</sup>	
Graduate & above	26 (23.45) 4 (6.55) 30		14 (13.54) 1 (1.45) 15		
Inter & H.School	47 (45.32) 11 (12.67) 58	5.39 H.S.	37 (36.13) 3 (3.87) 40	6.3 H.S.	
Below H.School	34 (32.4) 7 (8.45) 41		3 (4.52) 2 (.48) 5		
Uneducated	79 (85.18) 30 (23.81) 109		2 (1.80) NIL (.19) 2		
X <sup>2</sup> = .28+.63+.79+.45+.99+.22+.43+1.60 =5.39 H.S.		X = .015+.209+.511+.022+.139+.404+4.81+.19 =6.3 H.S.			

TABLE 4.36

Agreement in vocational opinion of the pupils and their parents' ambition on the basis of their parents' income

N=238		Boys		N=62		Girls	
Income group	No. of cases of agreement	No. of cases disagreement	Total $\chi^2$	No. of cases of agreement	No. of cases of disagree-ment.	Total $\chi^2$	
1-200	105 (101.59)	25 (28.40)	130	3 (4.61)	2 (.483)	5	9.47
			3.184				
201-400	36 (35.16)	9 (9.83)	45	28 (27.09)	2 (2.90)	30	sign. at .05 level
			N.S.				
401-600	34 (36.73)	13 (10.26)	47	17 (15.35)	NIL (1.65)	17	
601 and above	11 (12.50)	5 (3.49)	16	8 (9.03)	2 (.97)	10	
Total	186	52	238	56	6	62	

$\chi^2 = .114 + .20 + .202 + .18 + .407 + .70 + .731 + .65$   
 $= 3.184$  H.S.

$\chi^2 = .505 + .030 + .177 + .117 + .4.77 + .279 +$   
 $1.65 + 1.94$   
 $= 9.47$   
 Sig. at .05 level

9.47  
 sign.  
 at  
 .05  
 level

H.S.

The results of analysis provided in tables 4.34 to 4.36 lead to the following findings:

1) There is agreement in pupils' own choice and parents ambition in 78% cases in regard to boys and 90% cases in regard to girls as is seen in table 4.33. This shows that agreement is greater in case of girls than boys. The value of Z computed to find the significance of difference between these two percentages comes to be 2.57 which is significant nearly at .01 level.

2) When we examine the extent of agreement in self choice and parents' ambition on the basis of pupils' parents' occupation as in table 4.34, it is noted that in case of both boys and girls, the values of chi squares which are respectively 3.165 and 3.48 do not reach the level of significance. This fact shows that the extent of agreement in self choice and parents' ambition is independent of parents' occupation in case of boys as well as girls.

3) The data regarding extent of agreement in self choice and parents' ambition on the basis of parents'

education is provided in table 4.35. The size of Chi Squares for boys and girls are respectively 5.39 and 6.3 which do not reach the level of significance. This fact shows that the extent of agreement in pupils' vocational choices and parents' ambition is independent of parents' education in case of boys as well as girls.

4) When the data pertaining to the extent of agreement in self choice of the pupils is studied on the basis of their parents' level of income (table 4.36), it is noted that the size of chi squares for boys and girls are respectively 3.184 and 9.47. Whereas the former value of Chi Square does not reach the level of significance the latter with 3 d.f. It would be interpreted to mean that in case of girls the extent of agreement in self choice is associated with parents level of income. This is however not so in case of boys.

TABLE 4.36'A'

Summary of results of comparison of various groups in  
regard to extent of agreement in vocational choices  
and parents' ambition.

Basis of comparison	Results	Sig. level
SEX	$Z=2.57$	05
Parents' occupation	Boys $\chi^2=3.165$	N.S.
	Girls $\chi^2=3.48$	N.S.
Parents' education	Boys $\chi^2=5.39$	N.S.
	Girls $\chi^2=6.3$	N.S.
Parents' income	Boys $\chi^2=3.184$	N.S.
	Girls $\chi^2=9.47$	05

## C H A P T E R - V -

### SUMMARY OF RESULTS AND DISCUSSION

The present chapter deals with an over-view of the project and summary discussion of results. It would be recalled that the present work was undertaken to study vocational interests of secondary school pupils in relation to some selected factors. To achieve this end the following investigations were made.

1) Vocational areas in which the dominant and least interests of the pupils lie were studied.

2) The extent of agreement in pupils' dominant interests and their vocational choices was found out.

3) The extent of agreement between pupils' vocational choices and parents' ambition was discovered.

In investigating the above problems data was also analysed to find out differences on the basis of sex, parents' education, occupation and income.

The study was conducted on three hundred(300) pupils (238 boys and 62 girls) selected from different schools. The statistical analysis was done by using non-parametric techniques such as Pearson's PM correlation between



rank, Kendall's coefficient of concordance and Z test to obtain significance of differences between percentages.

The hypotheses formulated were tested at .05 level of significance. The results obtained by this study are summarized below.

1) 87.4% of boys and 86.3% of girls were found to have their interests spread over 8 to 10 vocational areas.

2) Social, clerical and computational areas were the most popular among the pupils with 30, 23, and 13% pupils having their dominant interests in these areas.

3) Social and clerical areas are respectively most popular both in case of boys as well as girls. The greatest disparity between boys and girls appears in musical area which is ranked 10 by boys and 3.5 by girls and mechanical which is ranked 6.5 by boys and 10 by girls.

4) There is no relationship in the areas of dominant interests of boys and girls. It is clear from the t value of .730 used for testing significance of Rho of .25 found in ranks of boys and girls.

5) The areas of vocational interests which are least popular among the boys are respectively musical, artistic and out-door. Among girls they are respectively mechanical, persuasive and scientific.

6) There is no relationship in boys and girls so far as the areas of least interest are concerned. The value of  $t$  is 1.033 which is equivalent to the obtained value of .343 of  $R_{ho}$  and not significant at .05 level.

7) There is high degree of correlation in the areas of dominant and least interests for boys of class XII and those of class X, the magnitude of rank difference correlations being respectively .97 and .98.

8) There is great similarity in the pupils divided on the basis of parents occupation in areas of dominant interest as well as areas of least interest. This similarity is found in case of boys as well as girls. All the coefficients of concordance were found significant at .05 level and lead to the conclusion that parents' occupation does not affect the pattern of dominant interests of either sex of students.

9) The same result is obtained when effect of parents' education on pupils' pattern of dominant and least interests was probed. A great similarity was found in groups of pupils of parents of differing levels of education in regard to their areas of dominant and least interests with all the coefficient of concordance being significant at .01 level in case of the total sample and in case of boys and at .05 level in case of girls.

10) The level of income of parents also does not have any effect on the pattern of interests of boys as well as girls. When the coefficients of concordance were computed among the ranks of vocational areas assigned by different income level groups of pupils, all of them were found statistically significant.

11) Only 31.5% of boys and 56.4% of girls have made their vocational choices from vocational areas in which their dominant interests lie. The Z value computed to test the significance of difference between these percentages was 2.18. It indicates that

the difference is significant at .05 level. The difference is in favour of girls.

12) When the analysis was extended to see whether extent of agreement between dominant interests and vocational choices is affected by parents' occupation, education and income it was found that neither occupation nor income affects it neither in case of boys nor in case of girls. Parents' education, however, is significantly related with the extent of agreement between dominant interests and vocational choices in case of boys only. It is clear from the summary of results given below .

TABLE 4.32A

Summary of results of comparison of various groups in regard to extent of agreement between dominant interests and vocational choices.

Basis of comparison	Result	Sig.level
SEX	$Z=2.18$	.05
Parents' occupation	Boys $\chi^2 = 2.36$ Girls $\chi^2 = 2.56$	N.S. N.S.
Parents' Education	Boys $\chi^2 = 8.7$ Girls $\chi^2 = 2.67$	.05 N.S.
Parents' Income	Boys $\chi^2 = 4.016$ Girls $\chi^2 = 5.108$	N.S. N.S.

13) There was found much agreement between vocational choices of pupils and parents ambition. It was so in case of about 90% of girls and 78% of boys. The agreement was significantly greater in case of girls than boys, the Z value computed to test the significance of difference in the two percentages was 2.57 and significant at nearly .01 level.

Parents' occupation and education were not found to have any effect on the extent of agreement in pupils' vocational choices and their parents' ambition in case of boys as well as girls. However this agreement appears to be affected by parents' income in case of girls. The value of chi square in their case is 9.47 which is significant at .05 level. The vocational choices of girls of the lowest-income-group parents are in less agreement with their parents' ambitions and responsible for higher size of chi square value. The picture regarding comparative study of boys and girls in regard to the effect of their parents' occupation, education and income on the extent of agreement

between their vocational choices and parents  
ambition fielded the following results.

TABLE 4.36'A'

Summary of results of comparison of various groups  
in regard to extent of agreement in Vocational choices  
and parent's ambition.

Basis of Comparison	Results	Sig. level
SEX	$Z=2.57$	.05
Parents' occupation	Boys $\chi^2=3.165$ Girls $\chi^2=3.48$	N.S. N.S.
Parents' education	Boys $\chi^2=5.39$ Girls $\chi^2=6.3$	N.S. N.S.
Parents' income	Boys $\chi^2=3.184$ Girls $\chi^2=9.47$	N.S. .05

A- Discussion of results :

It has been revealed by the present investigation  
that as against the expectation of the investigator  
the process of progressive de-limitation of vocational

interests is very slow in case of the students of high school and intermediate classes. They seem to be undecided about choosing even tentatively few areas of interest. Perhaps lack of concentration of vocational interests stems from lack of opportunities in the school to try out interests through a provision of vocational activities. In western countries the programmes of vocational guidance are quite strong which facilitate the process of gradual concentration of pupils' interests in few areas. The implications of diffusion of vocational interests continuing even up to the last stage of schooling are indeed grave for taking decisions about future career by the students.

The difference in the areas of dominant vocational interests as found between boys and girls is not surprising. Both sexes have different social role expectations. Whereas girls generally adopt the role of house-wife, boys adopt the role of wage-earner. It is in keeping with these roles that

girls have their major interests in social, musical, artistic and literary areas whereas boys have them in computational, mechanical, social and clerical areas. Surprisingly, outdoor area is least popular with boys as with girls. This shows the over whelming influence of urban culture and attraction for white collar professions on boys of present generation. Surely, it is not a healthy sign for balanced economic growth of the country and needs to be remedied.

Yet other discomfoting feature of pupils' vocational planning revealed by the study relates to the fact that only about one third of boys and half of girls choose their vocations from the areas of their dominant interests. This situation portends ill for their satisfying vocational life as adults. It also reflects lack of guidance and vocational planning. However, a solution of this problem is not possible till the labour force in the market is much more than the number of available jobs. If a student decides to accept a job that is commensurate with his interests,



he may perhaps never get it. So he cannot wait to match the job offered and his interests. It does not however minimize the need of vocational guidance in school as well as in home.

It is noted that vocational choices of the students are made not so much on the basis of their genuine interests as on the basis of their parents' ambition. Parents' ambition have a strong intervening effect on the relationship between pupils' vocational interests and vocational choices. It appears that parents influence pupils' vocational choices more on grounds of extraneous considerations. This is more true in case of boys. In case of girls where agreement between parents' ambition and pupils' choices was found to the extent of 90% an important reason is the limitation of vocational choices imposed on them by their social role as housewife. Both parents as well as their daughters are conscious of it and aspire for only few types of jobs that have social approval for girls' entry.

The results of the study suggest, that in-view of fast developing techno-industrial base of the country which is generating new and varied types of jobs, students must be provided with necessary guidance in schools so that their vocational planning may be made in the light of full facts about their own abilities and interests on the one hand and world of work on the other.

**B. Limitation of the study :**

The present study has certain limitations which deserve to be mentioned here so that they may be kept in -view while interpreting the results and may serve as points of caution to any future researcher interested in studying vocational interests of the students.

Firstly, the design of the study has a scope of further improvement. The sample ought to have been larger so that when pupils are divided in sub-groups on the basis of variables such as parents' occupation

income and education, the number in each sub-group does not become too small for statistical analyses.

Secondly, the vocational preference record used for collecting data about vocational interests does not appear to be a very satisfactory tool for this purpose; specially, the activities relating to out-door area given in the record are mostly irrelevant for urban pupils. It would have certainly been more useful if more than one tool could be used for collecting evidence about vocational interests.

Thirdly, the information about parents' income to have been collected from some source more reliable than students. It is found that information supplied by them is not much dependable. The results obtained by analysing the data on the basis of parents' income are, therefore, of limited value.

Fourthly, the use of non-Parametric techniques makes the results of the study less sophisticated and affect adversely their generalizability. But the nature of data was such that parametric techniques

could not be applied.

A replication of the study with better design, larger sample and more efficient tools would be, surely, more rewarding.

C-Areas of further research:

The area of vocational interests from which the present problem was selected is pregnant with a number of other related questions, answers of which are likely to further develop insight in vocational development theory. During the progress growth of present work the investigator was confronted with several intriguing issues stemming from the study in hand. It was felt that the following problems need an urgent attention of future researchers.

1) A study of stability of vocational interests during pre-adolescence, adolescence and late-adolescence.

2) A study of relationship between vocational interests on the one hand and intelligence,

socio-economic status and achievement on the other.

3) A study of Relationship between personality needs and dominant vocational interests.

4) A study of Effect of aptitudes on vocational interests of secondary school students.

5) A study of Relationship between vocational interests and participation in co-curricular activities in schools.

**D- Suggestions :**

The following suggestions could be offered on the basis of the results of this enquiry for guidance of the higher secondary schools students, guidance personnel and parents.

1) It is a matter of common of observation that the teachers and counsellors solely rely on pupils' participation in certain activities as an indication of their interests and try to guide them accordingly. Identification of interests in this manner often results in misguidance of the students. It is, therefore,

suggested that students' interests observed through their activities should be interpreted very cautiously and if possible interest tests should be given to the students.

II) Students' dominant interests should be identified and greater number of activities both curricular and co-curricular be provided for further development of their major interests.

III) In order to develop realistic vocational self-concept among the students, a wide range of vocational activities and hobbies should be provided in the schools and students should be given maximum freedom in choosing activities in accordance with their genuine interests.

IV) In order to remove the discrepancy between vocational choices and their dominant interests, it is necessary that the students develop the ability to understand their unidentified interests for this purpose.

They must be encouraged to make use of standardised interest inventories and should be helped in the interpretation of their interest profiles.

V) Students should be encouraged to ignore such activities for which they do not have strong liking and helped to concentrate on such activities which are most attractive to them. This will lead to gradual di-limitation and prove useful in making vocational choices.

VI) Arrangement should be made in all secondary schools for dissemination of occupational information to the students through lectures, film-shows, career pamphlets and visit to sites of work. It is necessary for orienting pupils to the world of work.

VIII In order to bring realism in parents' ambition regarding their wards' future vocations, parents' conferences must be held from time to time in which they must be apprised of their wards' vocational interests, abilities and vocational planning. This will develop in parents a feeling of confidence about guidance given to their children in school; the discrepency, if any, between parents' ambition pupils' vocational choices can also be removed in these conferences.

Needless to say that effective and systematic programmes of guidance should be launched in all the secondary schools without delay if the vast human resource of the country is to be properly utilized for re-construction of the nation and a balanced economic growth of the country.



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VOCATIONAL PREFERENCE RECORD

Name:.....Sex:.....Age:.....

Class:.....Father's Name:.....

Education:.....,Occupation:.....

Income:.....

1. What occupation do you want to choose in your life:.....

.....

2. Do you think you have got requisite abilities to succeed  
in that ? .....

3. In what occupation do your parent want you to enter:.....

.....

# VOCATIONAL PREFERENCE RECORD

नाम.....वर्ष.....आयु.....

परिचय का व्यवसाय..... आय.....

विषय.....

## काम सम्पन्न करने

### भाग-1

- 1-खेती करना 2-1-0
- 2-पाण्डों का पालना 2-1-0
- 3-दूध की डेरी चलाना 2-1-0
- 4-ऊँटों के बाल बनाना 2-1-0
- 5-पानी पकड़ना 2-1-0
- 6-ऊँटों में काम करना 2-1-0
- 7-फूलों के बगीचे बनाना 2-1-0
- 8-पहाड़ों पर घूमना 2-1-0
- 9-देश विदेश की पैर 2-1-0
- 10-निकार करना 2-1-0

### भाग-5

- 1-क्रीडा क्लब की का अफस बनना 2-1-0
- 2-गोरेणों में खेलने का काम करना 2-1-0
- 3-विदेशों में व्यापार करना 2-1-0
- 4-बड़े होटल का मैनेजर बनना 2-1-0
- 5-राजनीतिक पार्टी का काम करना 2-1-0
- 6-सिनेमा घर का मैनेजर बनना 2-1-0
- 7-विदेश में राजदूत बनना 2-1-0
- 8-विमान का काम करना 2-1-0
- 9-कपड़े का व्यापारी बनना 2-1-0
- 10-थोक का व्यापार करना 2-1-0

### भाग -2

- 1-छड़ी की सम्पत्त का काम 2-1-0
- 2-नौकरी के कारखाने में काम 2-1-0
- 3-नहानों के इन्जीनियर का काम 2-1-0
- 4-बिल्ली की गणितों का काम 2-1-0
- 5-लकड़ों के कारखानों में काम 2-1-0
- 6-मोटर या रेल के इन्जीनियर का काम 2-1-0
- 7-कपड़े की मिल में काम 2-1-0
- 8-रेलियों की सम्पत्त का काम 2-1-0
- 9-पाइपलाइन की सम्पत्त का काम 2-1-0
- 10-तालों की सम्पत्त का काम 2-1-0

### भाग-3

- 1-आपदनी खर्च का विचार करना 2-1-0
- 2-विचार क्लब की सचि प्रस्ताव 2-1-0
- 3-ऊँची कगारों में गणित करना 2-1-0
- 4-गणित के अद्ययन बनना 2-1-0
- 5-गणित में नयी नयी गोज करना 2-1-0

### भाग -4

- 1-नई वैधानिक गोज करना 2-1-0
- 2-कृषि तीटाणुओं का अध्ययन करना 2-1-0
- 3-जीत गान की नई नई गोज करना 2-1-0
- 4-गृहों तथा नहरों का अध्ययन करना 2-1-0
- 5-भौतिक गान प्रस्ताव 2-1-0
- 6-साधारण गान या प्रोफेशन बनना 2-1-0
- 7-वाटनी पीछना 2-1-0
- 8-पेड़ पौधों का विशेष गान प्राप्त करना 2-1-0
- 9-जापानी विद्या पीछना 2-1-0
- 10-सारे सारे देशों की गोज करना 2-1-0

9.

भाग-6

1-भवन निर्माण का काम करना	2-1-0
2-चित्रकार बनना	2-1-0
3-घर सजाना	2-1-0
4-कार्टून बनाना पीछना	2-1-0
5-मूर्ति बनाना पीछना	2-1-0
6-पत्रों की नयी नयी डिजाइन सोचना	2-1-0
7-पुस्तक का पूर्ण वर्तन बनाना	2-1-0
8-अच्छा फोटो ग्राफ बनना	2-1-0
9-सुन्दर पोस्टर तैयार करना	2-1-0
10-सकल्लेरीय पत्रों की कला पूर्ण वास्तु बनाना	2-1-0

भाग-7-

1-अभिनय करना एक्टिंग करना	2-1-0
2-कविता लिखना	2-1-0
3-अच्छा वा प्रभाव बनना	2-1-0
4-हिन्दी, संस्कृत, अंग्रेजी का विज्ञान बनना	2-1-0
5-उत्तम गाने लिखना	2-1-0
6-अच्छा चरित्रकार बनना	2-1-0
7-वकील या राज बनना	2-1-0
8-नाटक लिखना	2-1-0
9-विदेशी भाषाओं पीछना	2-1-0
10-रेडियो या सिनेमा के लिये कहानी लिखना	2-1-0

भाग-8

1-किली गाने लिखना	2-1-0
2-साप्ताहिक संगीत पीछना	2-1-0
3-कृष्ण नृत्यकार बनना	2-1-0
4-तबला पीछना	2-1-0
5-वीणा, तारुण्य या तारुणी पीछना	2-1-0

भाग-9

1-पगल पैना करना	2-1-0
2-अनाथालय चलाना	2-1-0
3-अनपढ़ लोगों को पढ़ाना	2-1-0
4-रेल क्राप या फ्रंट पेड का कार्य करना	2-1-0
5-बादपीछितों की सहायता करना	2-1-0

भाग-10

1-दफ्तर में हल्ले कर्त या काम करना	2-1-0
2-शार्ट हेड पीछना	2-1-0
3-देर तक टाकस करना	2-1-0
4-परीक्षा की उत्तर पत्रिकारों जातना	2-1-0
5-पोस्ट मास्टर का काम करना	2-1-0

नोट- फ्रि देसों लि तुपने तैय  
प्रत्येक प्रश्न का उत्तर देना आवश्यक है । प्रश्न छोड़ा तो नहीं है